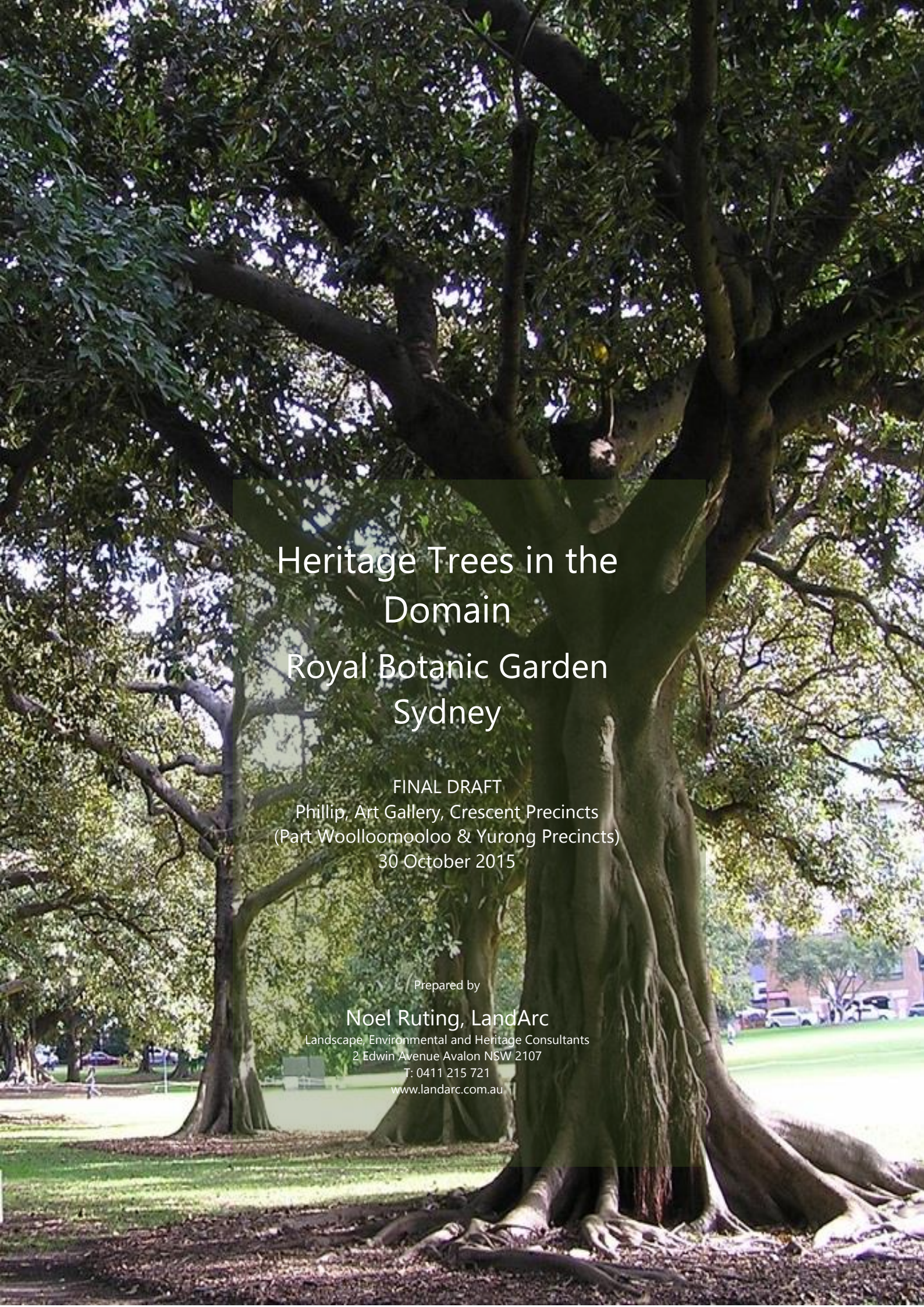

Heritage Trees in the Domain

Royal Botanic Garden Sydney

FINAL DRAFT
Phillip, Art Gallery, Crescent Precincts
(Part Woolloomooloo & Yurong Precincts)
30 October 2015

Prepared by

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CONTROLLED DOCUMENT

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Contents

PART 1:

1.0 Introduction

Overview

Heritage trees (or significant trees) reflect the patterns, processes, interactions and relationships which have shaped the city's historic and cultural landscape character. These trees are inextricably linked to the quality of 'place'. They are an integral part of an ever-changing landscape through their dynamic cycle of growth, maturity, ageing, senescence and renewal. Heritage trees retain exceptional values in terms of their contribution to our environment.

The natural and cultural significance of heritage trees are encapsulated in a recognisable range of values for past, present and future generations. These values may be natural, cultural, historic, scientific, aesthetic, visual, social, spiritual and commemorative. The Australia ICOMOS Burra Charter refers to cultural significance as being *"embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects"* (Australia ICOMOS Burra Charter, 2013). The dynamic living collection of heritage trees in the Domain create a place of exceptional cultural significance. These trees have associations with individual people and communities, telling stories of other times and places and *"often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences"* (ibid. 2013).

The Royal Botanic Garden, Sydney has played a pivotal role in the development and evolution of Sydney's parks and significant tree collections. In recognising these trees in terms of their contextual relationships, greater meaning can be brought to the past, allowing a richer understanding of the present. This in turn can provide the basis for better methods of protection, care and management for the future. The assessment of heritage significance is a dynamic process, changing with the passage of time and reflecting the way people interact and perceive the relative importance of places and items, particularly as parts of this collective heritage are lost (Burra Charter 2013).

The Royal Botanic Garden, Sydney and the Domain are listed on the State Heritage Register (SHR 2015). David Mabberley described the Royal Botanic Garden, Sydney (RBGS) as a place of *"exceptional heritage significance"* and *"one of the great tree-collections of the world"* (Mabberley 2004, p.2). Specifically, the Domain has national significance in providing an understanding of Governor Macquarie's plan for Sydney. The Domain is part of the most extensive cultural landscapes in Australia dating from the colonial period and remaining substantially intact and accessible by the public (State Heritage Register, 2012). Since its establishment, parts of the Domain have been alienated through the addition of buildings, car parks and roads (SHR, 2012). Notably, the Domain retains *"considerable potential to reveal much about the formative town planning, settlement and development pattern of the City of Sydney"* (Read, S., SHR listing).

It is important to recognise the cultural significance of this exceptional living collection. *"Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious"* (Burra Charter 2013).

In 1999 the Royal Botanic Gardens Sydney (RBGS) commissioned a master plan outline for the Domain from Mather & Associates Landscape Architects (MALA). This document, titled *The Domain: Master Plan Outline* prepared by MALA in 2000, addressed various issues including significance of the cultural landscape resource. Volume 2: *Cultural Landscape Study* of the outline report specifically addressed the heritage context of the place by assessing its cultural significance and providing a basis for the ongoing management of The Domain in accordance with best practice principles (Morris, C., pers. comm., 2015). Chapters were divided between authors Rosemary Annable and Colleen Morris (2000).

The Domain: Master Plan Outline 2000 (Vol.1) prepared by MALA included an assessment of heritage significance of trees in the Domain. A series of hand-written sheets were prepared identifying each of the Domain precincts and locations of trees assigning levels or rankings of significance (1) exceptional, (2) high, (3) moderate, (4) some and (5) little. The criteria for determining the "nature of significance" was shown as (H) associational value, (A) aesthetic, (S) scientific and (L) social for individual and clusters of trees. These tree assessment sheets (based on heritage significance) were to be inserted into the report as an Appendix (Morris, C., pers. comm., 2015).

In the absence of a filed copy of the master plan outline report and supportive documentation for this assessment process it remained unclear as to how these significance attributes were assessed. Recent advice however confirmed that the significance rankings were based on NSW heritage criteria (Morris. C., pers. comm., 21/05/2015). Nevertheless, this study was considered timely in view of the fact that a heritage assessment of the trees had not been conducted since 2000 – a fifteen year gap in the review process. Many changes have occurred within this population since preparation of the original heritage database.

Aim

The purpose of a Register of Heritage in the Domain aims to identify and recognize the importance of heritage trees in the landscape, to guide their management and to ensure their protection for future generations. The Domain's dynamic living collection has over 1400 trees (including palms) (Bidwell, D., pers. Comm., 2015). This study investigated and assessed the heritage significance of a total of 597 trees and palms, approximately 43% of the total collection in the Domain.

The Royal Botanic Garden Sydney (RBGS) maintains an active database of all trees within the Living Collection. The data covers a broad range of fields to identify and describe individual trees and to facilitate broader management objectives. This database includes current profiling for "Cultural Significance/ Significance: Cultural Notes" and is largely based on the heritage assessment contained within *The Domain: Master Plan Outline* prepared in 2000 by Mather & Associates Landscape Architects (MALA, 2000) and *Significant Trees at Royal Botanic Gardens Sydney*, a report written by David Mabberley for the Royal Botanic Gardens Conservation Management Plan (Conybeare Morrison, 2005).

The heritage assessment contained in this report is in accordance with the Australia ICOMOS *Burra Charter* and the NSW Heritage Council publication – *Supplementary Guide to Assessing Heritage Significance*: The process including research (literature review), site investigation, assessment and documentation based on tested heritage criteria provides a consistent analytical approach facilitating improved planning, protection and management of heritage trees.

The Australia ICOMOS *Burra Charter* 2013 establishes a set of commonly accepted values for *cultural significance* referring to *"aesthetic, historic, scientific, social or spiritual value for past, present or future generations"* (Burra Charter 2013). Following *Heritage Act 1977* amendments in 1999, items and places are assessed in accordance with established heritage criteria to determine the level of heritage

significance. The NSW Heritage Council publication – *Supplementary Guide to Assessing Heritage Significance* identifies seven heritage assessment criteria which have been used in the assessment of heritage trees in the Domain:

a) It is important in the course, or pattern of NSW (or the local area's) cultural or natural history – known as *historic significance*
b) It has strong or special association with the life or works of a person or group of persons, of importance in the cultural or natural history in NSW (or the local area) – known as *historic associations*
c) It is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area) – known as *aesthetic* or *technical significance*
d) It has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons – known as *social significance*
e) It has potential to yield information that will contribute to an understanding of NSW (or the local area's) cultural or natural history – known as *research potential* or *educational significance*
f) It possesses uncommon, rare or endangered aspects of NSW (or the local area's) cultural or natural history – known as *rarity*
g) It is important in demonstrating the principal characteristics of a class of in NSW (or the local area's) cultural or natural places or cultural or natural environments – known as *representative significance*.

The rarity, integrity and representative values of a significant tree or group of trees are particularly important criteria in assessing comparative significance.

Priority locations

This Register of Heritage Trees in the Domain refers to the following precincts and current priority locations for heritage assessment. Refer to *Selected Precincts* and plans [PLANS A-D] showing heritage items as scheduled. Sheet Nos. refer to hand-written plans showing earlier assessment rankings (MALA 2000):

- Phillip Precinct [PLAN A] (Sheet Nos. 8, 9 and 10);
- Art Gallery & Crescent Precinct [PLAN B] (Sheet Nos. 5, 6 and.7);
- Woolloomooloo Precinct [PLAN C] (Bed DL28 – Sheet Nos. 3 and 4); and
- Lower level eastern seawall [PLAN D] (Yurong Precinct – Sheet Nos. 1 & 2).

Other areas including the balance of Yurong and Woolloomooloo Precincts, and all of Macquarie and Tarpeian Precincts have not been identified as a priority at this stage and therefore not included in this Register of Heritage Trees in the Domain.

Research and literature review

As a key part of this study research has focussed on primary sources. This process included Director's Annual Reports 1828-1924, Charles Fraser's catalogues of the Gardens (1828-1831), Joseph Maiden's 1924 Manuscript, archival databases, historic images, maps and plans, historic plant receipts and dispatches, herbarium sheets, current living collection databases and various heritage studies from the Daniel Solander Library, Mitchell Library and State Library online collections, Trove database (including newspaper articles), State Records, heritage listings and schedules. The database covering the Domain provides a detailed account of the changes to remnant native vegetation and a chronological history of the various layers of planting since the early nineteenth century.

Field investigation and assessment

Detailed field investigation, ground truthing, evaluation and assessment has been conducted for all trees within these precincts. Data has been collected on species, quantities, location and chronological layouts/ groupings and individual specimen planting. Tree height, canopy, dbh (diameter at breast height), condition, age structure has also been checked with the existing data base. Additional comments have been provided in the report.

Statement of significance

The heritage values for each listed tree or group of trees is summarised in a Statement of Significance. This exercise involves interpretation and analysis of comparative points of importance (e.g. values including rarity, biodiversity, individual and/ or group, landmark, representative and integrity, research and social, cultural and spiritual associations). The criteria relate to both cultural and natural significance of an item and place. The heritage values of a significant tree or group of trees are almost always multi-layered.

Scope of study

This Register provides a detailed assessment, evaluation, comparative analysis and documentation of all listings within selected precincts. The scope of this study includes the following:

- Co-ordination with Royal Botanic Garden Sydney (RBGS) staff;
- Archival research (incl. detailed investigation of chronology, phasing and infill planting for each group/ specimen planting and associations) at the Daniel Solander Library RBGS, Mitchell Library and State Library of NSW;
- Detailed site investigation, heritage assessment, evaluation and comparative analysis of each group and individual/ specimens;
- Preparation of this report including:

  PART 1: INTRODUCTION
  - Overview, aims and objectives, scope of study;
  - Heritage assessment methodology;
  - Summary schedule – application of criteria (precinct and group levels) in accordance with Heritage Office Inventory Database;
  - Precinct plans with scheduled items.

  PART 2: SCHEDULES
  - Inventory sheets (scheduled items);
  - Statement of Significance (including contextual and comparative assessment relating to level of significance;
  - Physical description within precinct;
  - Historic background – historical notes, themes (State and local);
  - Application of Heritage Criteria (separate tables);
  - Sources/ Referencing.

Selected precincts

Heritage tree assessments have been prepared for the following priority locations:

- **Phillip Precinct**: including Central Avenue, 'Gymnasium' group, northern (avenue) group, upper eastern lawns adjacent to 'Pavilion on the Park' and Art Gallery Road, south-western group and Hospital Road, palm grove (corner of Art Gallery Road and Hospital Road), olive grove and outliers;
- **Phillip and Crescent Precincts**: Art Gallery Road fig avenue;
- **Art Gallery Precinct**: including lawns adjacent to AGNSW and group north of the land-bridge;
- **Crescent Precinct**: including lawns immediately south of AGNSW and adjacent to St. Mary's Road and Domain Lodge;
- **Woolloomooloo Precinct**: lawn area DL28 (opposite sub-station);
- **Yurong Precinct**: lawn adjacent to seawall between Yurong Gate and Mrs Macquarie's Point.

Definitions – heritage significance

As previously stated, heritage tree assessment is in accordance with the Australia ICOMOS *Burra Charter* and the NSW Heritage Council publication – *Supplementary Guide to Assessing Heritage Significance*. Trees which are assessed as having significance in terms of the established criteria are listed in TABLE 1: SUMMARY OF TREES WITH HERITAGE SIGNIFICANCE. A detailed assessment of heritage trees is provided in PART 2: SCHEDULES OF HERITAGE TREES IN THE DOMAIN.

An opinion of the level of significance for group and individual items acknowledges the assessments prepared under the *The Domain: Master Plan Outline 2000* (Vol.1) prepared by MALA and the paper prepared by David Mabberley (2004) – *Significant Trees at Royal Botanic Gardens Sydney (i.e. exclusive of the Domain and the grounds of Government House).* This study establishes the following categories and definitions of heritage significance for trees in the Domain:

1. EXCEPTIONAL
   a) Individual or groups of specimen trees which are old growth remnants of the original natural vegetation (i.e. possibly pre-dating European settlement) and which demonstrate proven provenance and continuity of records in this location;
      Or
   b) Cultivated individual or groups of specimen trees which demonstrate an exceptional range of heritage values (including rarity and associational values with early Superintendents or Directors of the Botanic Garden before 1848) and either a direct link to the voucher specimen or continuity of records from earliest planting within the Domain.

2. HIGH – VERY HIGH
   a) Individual or groups of specimen trees which are descendants or regrowth of the original natural vegetation (100 years+ age structure) and which demonstrate proven provenance and continuity of records in this location;
      Or
   b) Cultivated individual or groups of specimen trees which demonstrate a high level of heritage values, including rarity and associational values (e.g. Charles Moore 1848-96 or J.H. Maiden 1896-1924) and continuity of planting records within the Domain.

3. MODERATE
    a) Cultivated individual or groups of mature trees which can demonstrate proven provenance with original natural vegetation and continuity of records in this location;
    Or
    b) Cultivated individual or groups of specimen trees which demonstrate a moderate level of heritage values dating from the mid-to late Inter-war period (after J.H. Maiden 1925-1940) including rarity and associational values and continuity of planting records within the Domain;
    Or
    c) Cultivated individual trees (including relatively recent planting) marking a significant commemorative event and high associational values (item usually identified with a commemorative label).

Notably, trees which contribute positively to the visual and aesthetic qualities of the landscape but are somewhat limited in terms of heritage values are not included in the above categories for significance. These trees, including post-war period ornamental planting, late twentieth century and more recent immature native and exotic plantations (e.g. recent plantings with associational values only) have been assessed as having a LOW or NEUTRAL level of significance in this landscape. These trees include both native and exotic species and in time, many of these may acquire a level of significance as described.

It is important to recognise that recent cultural planting over the past decade including native *Ficus* spp. (figs) and *Araucaria/ Agathis* spp. (conifers), some notably with rarity values, will in time reinforce strong historic and associational values of existing plantations in the Domain. In addition, protection and conservation of local provenance in native planting within precincts such as Woolloomooloo and Yurong will further enhance the special "sense of place" of this location. Over time these trees will reinforce the Domain's continuing narrative, linking its natural history and cultural landscape embellishment whilst creating valuable opportunities for intergenerational equity.

Outcomes

A total of 597 trees and palms have been assessed in this study (including 275 items in Phillip Precinct, 301 items in Crescent and Art Gallery Precincts and 21 items in the selected portions of Woolloomooloo and Yurong Precincts).

The study establishes group listings within each of the precincts based on archival evidence, site investigation and ground truthing. These group listings develop a chronological sequence of planting within the Domain under various directorships spanning a history of 200 years. Within each group listing key individual components are identified and assessed in accordance with the heritage criteria. A total of 158 individual tree listings have been identified and documented as having heritage significance.

For example, SCHEDULE 1: Central Avenue group including mixed figs, trees and palms are assessed in the context of the Domain, city-wide, greater metropolitan area and state level. The group is assigned a level of significance based on a process of comparative analysis. Each item is also examined within the group context and an assessment is made regarding its contribution to significance.

TABLE 1: SUMMARY OF TREES WITH HERITAGE SIGNIFICANCE provides a colour-coded key identifying heritage significance rankings. The first column identifies the precinct, schedule and listed items including details for each tree species, location (e.g. lawn or bed number), IRN (a unique identifier for each tree generated by the RBGS Living Collection Database) and COUNT (a unique identifier in the Tree Database). The second column refers to the item's significance ranking. The third column identifies the item's first reference (page no.) in the schedules (PART 2: SCHEDULES OF HERITAGE TREES IN THE DOMAIN). The fourth column refers to the Statement of Significance.

TABLE 1: SUMMARY OF TREES WITH HERITAGE SIGNIFICANCE

KEY TO HERITAGE SIGNIFICANCE RANKINGS:

EXCEPTIONAL VERY HIGH

HIGH MODERATE

In column 1, IRN number is a unique identifier for each tree and is generated by the RBGS Living Collection Database. COUNT number is a unique identifier in the Tree Database.

Phillip Precinct:	Significance Ranking	First Reference	Statement of Significance
SCHEDULE 1: Central Avenue (incl. 'gymnasium' group and northern group)		**Page 29**	**Page**
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL2a IRN: 4224107 [COUNT: 1051]	H	29	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*?** LAWN: DL2a IRN: 4224552 [COUNT: 1218]	VH	29	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224553 [COUNT: 1216]	VH	29	31
Phoenix canariensis Hort. ex Chabaud LAWN: DL2a IRN: 4220046 [COUNT: 734]	H	29	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224574 [COUNT: 1214]	VH	29	31
Ficus virens Aiton LAWN: DL3a IRN: 4112876 [COUNT: 1215]	VH	29	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL3a IRN: 4224106 [COUNT: 1050]	H	29	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224578 [COUNT: 1212]	VH	29	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL3a IRN: 4223421 [COUNT: 1048]	H	29	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224609 [COUNT: 1210]	VH	29	31
Agathis robusta (F.Muell.) Bailey LAWN: DL3a IRN: 4039036 [COUNT: 2290]	**E**	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224643 [COUNT: 1196]	VH	30	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL3a IRN: 4223422 [COUNT: 1046]	H	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224667 [COUNT: 1195]	VH	30	31
Cinnamomum camphora (L) LAWN: DL10c IRN: 4051446 [COUNT: 2179]	H	30	31

Phoenix canariensis Hort. ex Chabaud LAWN: DL10c IRN: 4220047 [COUNT: 733]	H	30	31
Flindersia australis R.Br. LAWN: DL10c IRN: 4052021 [COUNT: 1036]	**E**	30	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL10c IRN: 4223420 [COUNT: 1049]	H	30	31
Flindersia australis R.Br. LAWN: DL10c IRN: 4052020 [COUNT: 1035]	**E**	30	31
Ficus rubiginosa Desf. ex Vent. LAWN: DL10c IRN: 4224646 [COUNT: 1106]	VH	30	31
Phoenix canariensis Hort. ex Chabaud LAWN: DL10c IRN: 4220045 [COUNT: 729]	H	30	31
Flindersia australis R.Br. LAWN: DL5 IRN: 4052019 [COUNT: 1034]	**E**	30	31
Phoenix canariensis Hort. ex Chabaud LAWN: DL5 IRN: 4220049 [COUNT: 728]	H	30	31
Ficus rubiginosa Desf. ex Vent. LAWN: DL5 IRN: 4224679 [COUNT: 2201]	VH	30	31
Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL10c IRN: 4062891 [COUNT: 973]	VH	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10c IRN: 4224575 [COUNT: 1211]	VH	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10c IRN: 4224612 [COUNT: 1201]	VH	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10c IRN: 4224613 [COUNT: 1199]	VH	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10c IRN: 4224614 [COUNT: 1200]	VH	30	31
Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL10c IRN: 4062892 [COUNT: 972]	VH	30	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10c IRN: 4224638 [COUNT: 1198]	VH	31	31
Pinus roxburghii Sarg. LAWN: DL10c IRN: 4024157 [COUNT: 943]	VH	31	31
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 4224510 [COUNT: 1219]	H	31	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL12 IRN: 4223417 [COUNT: 1054]	H	31	31
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL12 IRN: 4220077 [COUNT: 1053]	H	31	31
Podocarpus elatus R.Br. ex Endl. LAWN: DL12 IRN: 4079598 [COUNT: 927]	H	31	31
Harpephyllum caffrum LAWN: DL12 IRN: 4043909 [COUNT: 949]	H	31	31
Phoenix canariensis Hort. ex Chabaud LAWN: DL12 IRN: 4220044 [COUNT: 740]	H	31	31

Ficus virens Aiton **var. *virens*** LAWN: DL12 IRN: 4112877 [COUNT: 935]	VH	31	31
Eucalyptus maidenii F.Muell. LAWN: DL11 IRN: 4025476 [COUNT: 934]	M	31	31
Eucalyptus globulus Labill. LAWN: DL11 IRN: 4025468 [COUNT: 1032]	M	31	31
SCHEDULE 2: Fig tree grove – upper eastern slope (adjacent to Art Gallery Road)		Page **42**	Page
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** BED: D8d IRN: 4224508 [COUNT: 1225]	VH	42	43
Ficus rubiginosa Desf. ex Vent. BED: D8e IRN: 4224678 [COUNT: 1116]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** BED: DL12 IRN: 4224509 [COUNT: 1224]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL1a IRN: 4224551 [COUNT: 1222]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL1a IRN: 4224550 [COUNT: 1223]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224576 [COUNT: 1217]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224577 [COUNT: 2292]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 766935 [COUNT: 2293]	VH	42	43
Ficus rubiginosa Desf. ex Vent. LAWN: DL2a IRN: 4224675 [COUNT: 1113]	VH	42	43
Ficus rubiginosa Desf. ex Vent. LAWN: DL2a IRN: 4224650 [COUNT: 1114]	VH	42	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 766579 [COUNT: 1213]	VH	43	43
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224642 [COUNT: 1205]	VH	43	43
Ficus rubiginosa Desf. ex Vent. LAWN: DL3a IRN: 4224647 [COUNT: 1112]	H	43	43
Olea europaea* subsp. *cuspidata (Wall. ex G.Don) Cif. LAWN: DL3a IRN: 4112848 [COUNT: 2291]	E	43	43
SCHEDULE 3: South-western group and Hospital Road (lawns and beds)		Page **49**	Page
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10d IRN: 4224668 [COUNT: 1194]	VH	49	51
Taxodium mucronatum Ten. LAWN: DL10d IRN: 4037491 [COUNT: 940]	H	49	51
Ficus elastica LAWN: DL10d IRN: 4044074 [COUNT: 941]	H	49	51
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10d IRN: 4224611 [COUNT: 1202]	H	49	51

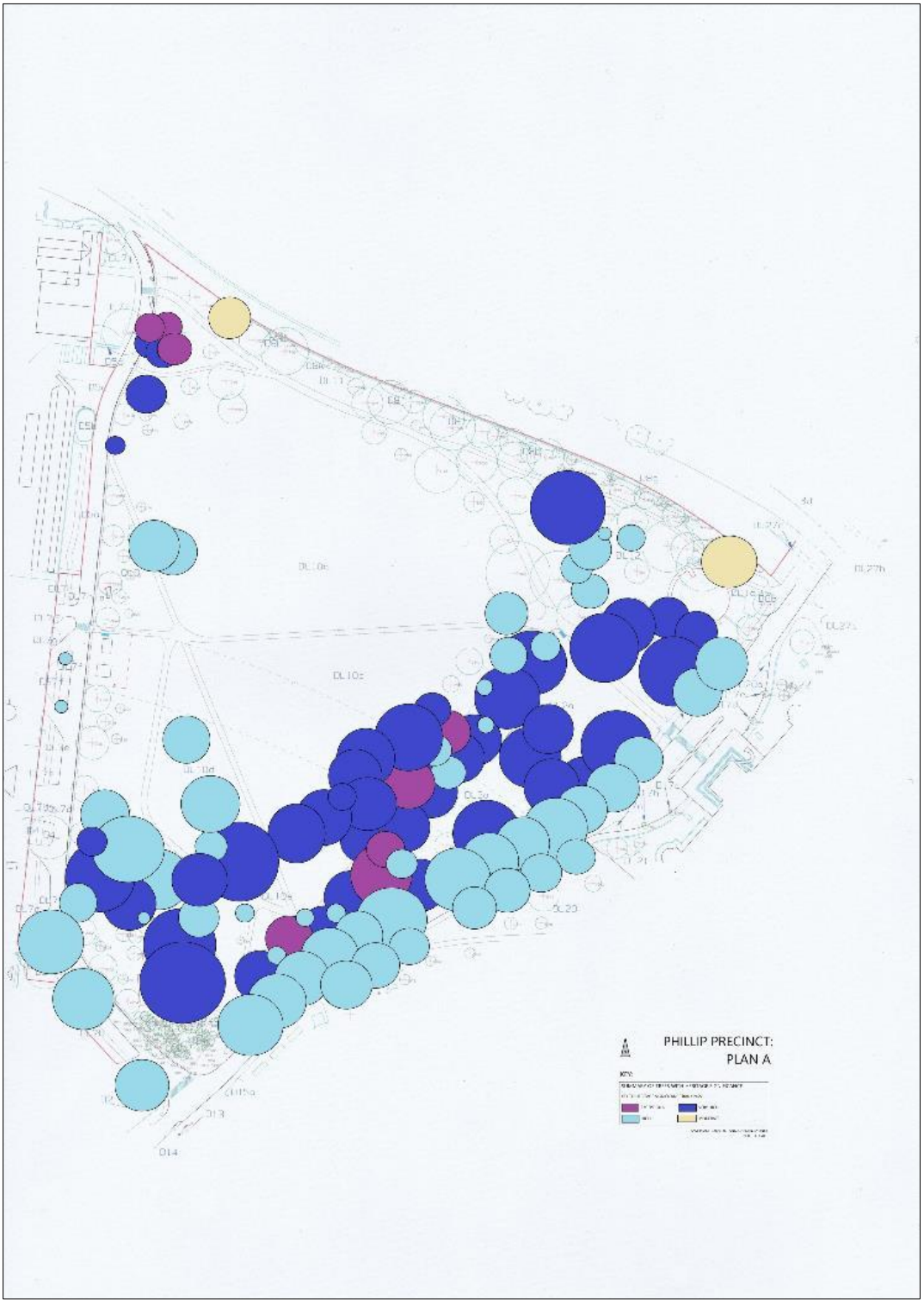
Olea europaea L. LAWN: DL10b IRN: 4112914 [COUNT: 986]	E	67	68
Olea europaea L. LAWN: DL10b IRN: 4112911 [COUNT: 987]	E	67	68
Olea europaea* subsp. *cuspidata (Wall. ex G.Don) Cif. LAWN: DL10b IRN: 4112914 [COUNT: 984]	VH	67	68
Olea europaea* subsp. *cuspidata (Wall. ex G.Don) Cif. LAWN: DL10b IRN: 4112913 [COUNT: 988]	VH	67	68
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 4224549 [COUNT: 1294]	H	67	68
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 784434 [COUNT: 2180]	H	67	68
Araucaria columnaris (G.Forst.) Hook. LAWN: DL10a IRN: 4056362 [COUNT: 971]	VH	67	68
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 4224506 [COUNT: 1296]	VH	67	68
Phillip and Crescent Precincts:	Significance Ranking	First Reference	Statement of Significance
SCHEDULE 6: Art Gallery Road (Hill's fig avenue)		Page **77**	Page
Ficus microcarpa LAWN: DL1b IRN: 4112906 [COUNT: 1097]	H	77	78
Ficus microcarpa LAWN: DL1b IRN: 4112905 [COUNT: 1098]	H	77	78
Ficus microcarpa LAWN: DL2a IRN: 4219315 [COUNT: 1095]	H	77	78
Ficus microcarpa LAWN: DL2a IRN: 4112908 [COUNT: 1096]	H	77	78
Ficus microcarpa LAWN: DL2a IRN: 4112909 [COUNT: 1099]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4224301 [COUNT: 1081]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4223444 [COUNT: 1083]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4219319 [COUNT: 1086]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4219318 [COUNT: 1088]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4219317 [COUNT: 1090]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 4219320 [COUNT: 1094]	H	77	78
Ficus microcarpa LAWN: DL3a IRN: 756317 [COUNT: 2164]	H	77	78

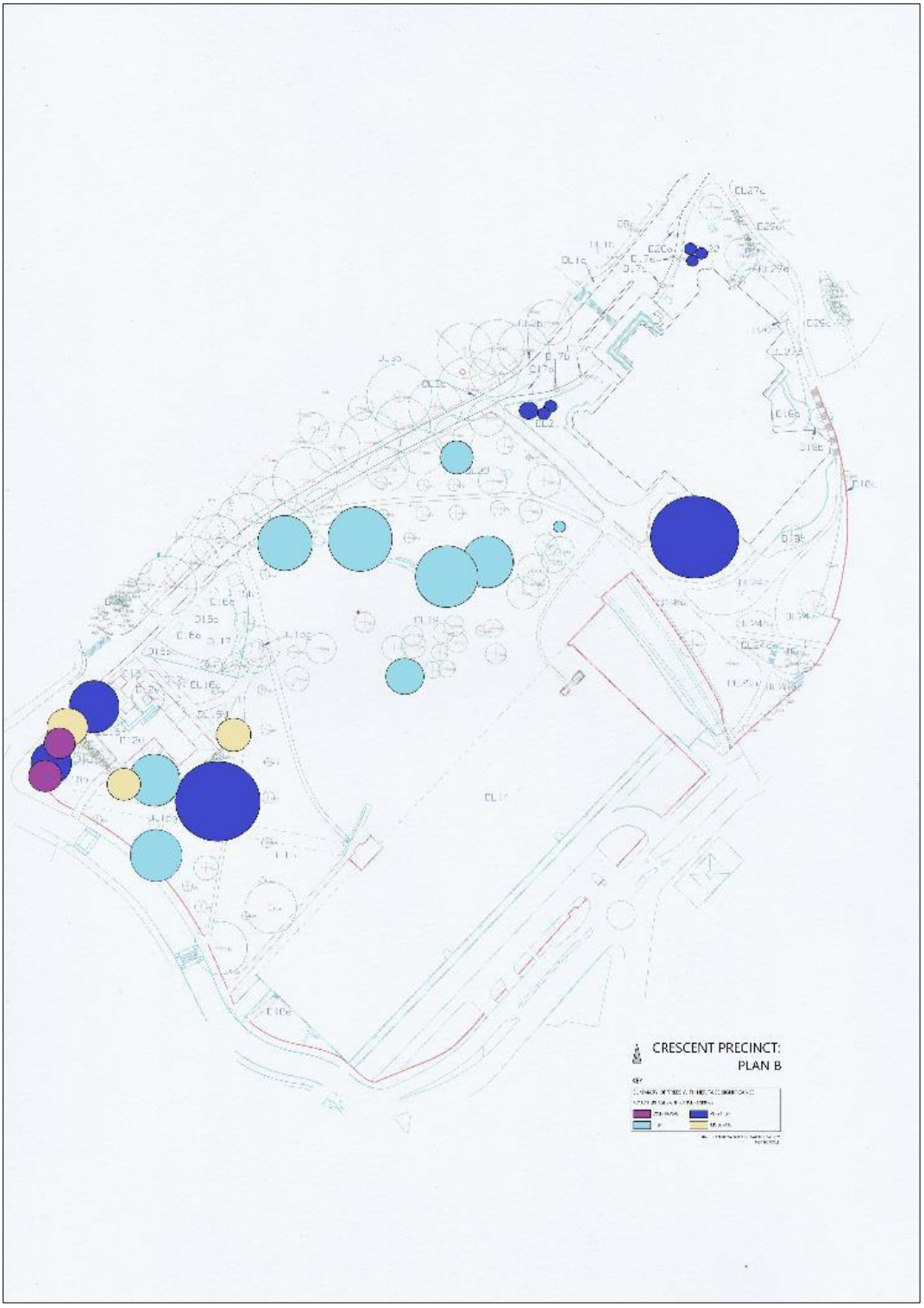
Ficus microcarpa LAWN: DL4	IRN: 4223445	[COUNT: 1079]	H	77	78
Ficus microcarpa LAWN: DL4	IRN: 4223447	[COUNT: 1080]	H	78	78
Ficus microcarpa LAWN: DL4	IRN: 4223446	[COUNT: 2165]	H	78	78
Ficus microcarpa LAWN: DL19	IRN: 4223449	[COUNT: 1082]	H	78	78
Ficus microcarpa LAWN: DL19	IRN: 4224111	[COUNT: 1093]	H	78	78
Ficus microcarpa LAWN: DL20	IRN: 4224112	[COUNT: 1084]	H	78	78
Ficus microcarpa LAWN: DL20	IRN: 4224115	[COUNT: 1089]	H	78	78
Ficus microcarpa LAWN: DL20	IRN: 4224116	[COUNT: 1091]	H	78	78
Ficus microcarpa LAWN: DL20	IRN: 42243000	[COUNT: 1092]	H	78	78
Art Gallery Precinct:			**Significance Ranking**	**First Reference**	**Statement of Significance**
SCHEDULE 7: Two palm groups – Art Gallery Road (adjacent to AGNSW)				Page **82**	Page
Phoenix canariensis Hort. ex Chabaud LAWN: DL21	IRN: 737825	[COUNT: 735]	VH	82	82
Phoenix canariensis Hort. ex Chabaud LAWN: DL21	IRN: 4224881	[COUNT: 736]	VH	82	82
***Phoenix* sp.** LAWN: DL21	IRN: 4087996	[COUNT: 1363]	VH	82	82
Phoenix canariensis Hort. ex Chabaud LAWN: DL22	IRN: 4224882	[COUNT: 737]	VH	82	82
Phoenix canariensis Hort. ex Chabaud LAWN: DL22	IRN: 4224883	[COUNT: 739]	VH	82	82
Phoenix canariensis Hort. ex Chabaud LAWN: DL22	IRN: 4224884	[COUNT: 741]	VH	82	82
SCHEDULE 8: Art Gallery (surrounds) including southern sloping lawn (adjacent to AGNSW) and land-bridge				Page **87**	Page
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL23	IRN: 4224900	[COUNT: 1221]	VH	87	87
Phoenix canariensis Hort. ex Chabaud LAWN: DL27	IRN: 4223453	[COUNT: 742]	H	87	87
Chamaerops humilis LAWN: DL27	IRN: 4219231	[COUNT: 2436]	H	87	87
Ficus rubiginosa Desf. ex Vent. LAWN: DL27	IRN: 4224761	[COUNT: 1118]	H	87	87

Ficus rubiginosa Desf. ex Vent. LAWN: DL27 IRN: 4224760 [COUNT: 1119]	H	87	87
Crescent Precinct:	**Significance Ranking**	**First Reference**	**Statement of Significance**
SCHEDULE 9: Upper lawns south of AGNSW		Page **93**	Page
Araucaria columnaris (G.Forst.) Hook. LAWN: DL19 IRN: 4056366 [COUNT: 969]	H	93	93
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224898 [COUNT: 1206]	H	93	93
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224899 [COUNT: 1207]	H	93	93
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224891 [COUNT: 1197]	H	93	93
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4012178 [COUNT: 1311]	H	93	93
Ficus rubiginosa Desf. ex Vent. LAWN: DL19 IRN: 4224828 [COUNT: 1110]	H	93	93
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL20 IRN: 4224562 [COUNT: 1047]	H	93	93
SCHEDULE 10: Lawns adj. to Domain Lodge (corner St. Mary's Road and Art Gallery Road)		Page **99**	Page
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** BED: D14 IRN: 4224861 [COUNT: 2163]	VH	99	100
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 4224876 [COUNT: 1193]	VH	99	100
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 4224887 [COUNT: 1188]	H	99	100
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 756321 [COUNT: 2319]	H	99	100
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL16a IRN: 4224516 [COUNT: 1045]	M	99	100
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16b IRN: 4224889 [COUNT: 1002]	VH	99	100
Phillyrea latifolia L. LAWN: DL16b IRN: 4224424 [COUNT: 1004]	**E**	99	100
Quercus suber LAWN: DL16b IRN: 4072302 [COUNT: 465]	**E**	99	100
Zelkova serrata (Makino) Thunb LAWN: DL16b IRN: 4069817 [COUNT: 370]	M	99	100
Populus x canadensis Moench LAWN: DL16e IRN: 4069870 [COUNT: 170]	M	99	100

Woolloomooloo Precinct:	Significance Ranking	First Reference	Statement of Significance
SCHEDULE 11: Lawn DL28 (opposite sub-station)		Page **107**	Page
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224703 [COUNT: 1232]	VH	107	108
Ficus virens Aiton **var. *virens*** LAWN: DL28 IRN: 4112878 [COUNT: 936]	VH	107	108
Ficus rubiginosa Desf. ex Vent. LAWN: DL28 IRN: 4224724 [COUNT: 1120]	H	107	108
Ficus rubiginosa Desf. ex Vent. LAWN: DL28 IRN: 4224725 [COUNT: 1121]	H	107	108
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224704 [COUNT: 1230]	H	107	108
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224705 [COUNT: 1231]	H	107	108
Eucalyptus pilularis Sm. LAWN: DL28 IRN: 4094071 [COUNT: 1318]	E	107	108
Eucalyptus pilularis Sm. LAWN: DL28 IRN: 4094072 [COUNT: 1319]	E	107	108
Yurong Precinct:	Significance Ranking	First Reference	Statement of Significance
SCHEDULE 12: Lawn adjacent to seawall (between Yurong Gate and Mrs. Macquarie's Point)		Page **114**	Page
Ficus rubiginosa Desf. ex Vent. LAWN: DL39b IRN: 4224589 [COUNT: 1132]	VH	114	115
Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL39b IRN: 4219387 [COUNT: 979]	H	114	115
Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL39a IRN: 4219392 [COUNT: 974]	VH	114	115
Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL39a IRN: 4062896 [COUNT: 975]	H	114	115
Eucalyptus tereticornis Sm. LAWN: DL39a IRN: 4223642 [COUNT: 1333]	E	114	115
Elaeocarpus kirtonii F.Muell. ex F.M.Bailey LAWN: DL39a IRN: 4210357 [COUNT: 3330]	M	114	115
Araucaria heterophylla (Salisb.) Franco LAWN: DL39a IRN: 4062900 [COUNT: 853]	VH	114	115
Ficus rubiginosa Desf. ex Vent. LAWN: DL40 IRN: 4224090 [COUNT: 1136]	H	114	115

Araucaria cunninghamii Aiton ex A.Cunn. LAWN: DL40 IRN: 4062894 [COUNT: 980]	H	114	115
Ficus rubiginosa Desf. ex Vent. LAWN: DL40 IRN: 4223399 [COUNT: 3323]	H	114	115
Ficus rubiginosa Desf. ex Vent. LAWN: DL40 IRN: 4223397 [COUNT: 1138]	H	114	115


PHILLIP PRECINCT:
PLAN A


CRESCENT PRECINCT:
PLAN B


WOOLLOOMOOLOO
PRECINCT: PLAN C


YURONG PRECINCT:
PLAN D

PART 2:
Schedules of Heritage Trees in the Domain

Phillip Precinct:

SCHEDULE 1: Central Avenue (incl. gymnasium group and northern group)
Lawns DL2a and DL3a (eastern row)
Lawn DL10c and DL5 (western row)
Lawn DL10c ('gymnasium' group)
DL10a (single item); Lawn DL5 (northern group)

SCHEDULE 2: Fig tree grove – upper eastern slope (adjacent to 'Pavilion on the Park' and upper lawns between Art Gallery Rd and Central Avenue)
Lawns/ beds: DL1a, D8d, D8e, DL12
Lawns: DL2a and DL3a

SCHEDULE 3: South-western group and Hospital Road (lawns and beds)
Lawns: DL10d, DL6 (south-western lawns)
Lawns/ beds: DL7a, DL7b, D3, D4, DL7f, DL7i (Hospital Road)

SCHEDULE 4: Palm grove (corner Art Gallery Road/ Hospital Road)
Beds: D1, D1a and D1b

SCHEDULE 5: Olive grove & western outliers (Hospital Road)
Lawns: DL10b and DL10a

Phillip and Crescent Precincts:

SCHEDULE 6: Art Gallery Road (Hill's fig avenue)
Lawns: DL1b, DL2a, DL3a, DL4 (Phillip Precinct)
Lawns DL19 and DL20 (Crescent Precinct)

Art Gallery Precinct:

SCHEDULE 7: Two palm groups – Art Gallery Road (adjacent to AGNSW)
Lawns DL21 and DL22

SCHEDULE 8: Art Gallery (surrounds) including southern sloping lawn (adjacent to AGNSW) and land-bridge upper slope
Lawns DL23 and DL27

Crescent Precinct:

SCHEDULE 9: Upper lawns south of AGNSW
Lawns DL20 and DL19

SCHEDULE 10: Lawns adj. to Domain Lodge (cnr. St. Mary's Road and Art Gallery Road)
Lawns/ beds: DL16a, DL16b, DL16e & D14

Woolloomooloo Precinct:

SCHEDULE 11: Lawn DL28 (opposite sub-station)
Lawn DL28

Yurong Precinct:

SCHEDULE 12: Lawn adjacent to seawall (between Yurong Gate and Mrs. Macquarie's Point)
Lawns DL39b, DL39a, DL40

Heritage Trees in the Domain

Royal Botanic Garden, Sydney

SCHEDULE 1

PRECINCT: PHILLIP (CENTRAL AVENUE & GYMNASIUM GROUP)

HERITAGE ITEM:	**MIXED SPECIES AVENUE & 'GYMNASIUM' GROUP**
LEVEL OF SIGNIFICANCE:	**EXCEPTIONAL (MIXED AVENUE + 'GYM' GROUP)** **HIGH – EXCEPTIONAL (INDIVIDUAL ITEMS)** **MODERATE – V. HIGH (NORTH GROUP & OUTLIERS)**
LOCATION:	Domain – Central Avenue & 'gymnasium' group
LAWNS/ BEDS:	Lawns DL2a and DL3a (eastern row); Lawn DL10c and DL5 (western row); Lawn DL10c ('gymnasium' group); DL10a (single item); Lawn DL5 (northern group)
HERITAGE ITEM/ TYPE:	Landscape – mixed species avenue, cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	Main avenue: c.1850s; later additions 1899-1912.
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED (EASTERN ROW):	***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL2a IRN: 4224107 [COUNT: 1051] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*?** LAWN: DL2a IRN: 4224552 [COUNT: 1218] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224553 [COUNT: 1216] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL2a IRN: 4220046 [COUNT: 734] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224574 [COUNT: 1214] ***Ficus virens*** Aiton LAWN: DL3a IRN: 4112876 [COUNT: 1215] ***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL3a IRN: 4224106 [COUNT: 1050] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL3a IRN: 4224578 [COUNT: 1212] ***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL3a IRN: 4223421 [COUNT: 1048] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla***

LAWN: DL3a IRN: 4224609 [COUNT: 1210]
Agathis robusta (F.Muell.) Bailey
LAWN: DL3a IRN: 4039036 [COUNT: 2290]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL3a IRN: 4224643 [COUNT: 1196]
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh.
LAWN: DL3a IRN: 4223422 [COUNT: 1046]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL3a IRN: 4224667 [COUNT: 1195]

ITEMS SCHEDULED (WESTERN ROW):

Cinnamomum camphora (L)
LAWN: DL10c IRN: 4051446 [COUNT: 2179]
Phoenix canariensis Hort. ex Chabaud
LAWN: DL10c IRN: 4220047 [COUNT: 733]
Flindersia australis R.Br.
LAWN: DL10c IRN: 4052021 [COUNT: 1036]
Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh.
LAWN: DL10c IRN: 4223420 [COUNT: 1049]
Flindersia australis R.Br.
LAWN: DL10c IRN: 4052020 [COUNT: 1035]
Ficus rubiginosa Desf. ex Vent.
LAWN: DL10c IRN: 4224646 [COUNT: 1106]
Phoenix canariensis Hort. ex Chabaud
LAWN: DL10c IRN: 4220045 [COUNT: 729]

Flindersia australis R.Br.
LAWN: DL5 IRN: 4052019 [COUNT: 1034]
Phoenix canariensis Hort. ex Chabaud
LAWN: DL5 IRN: 4220049 [COUNT: 728]
Ficus rubiginosa Desf. ex Vent.
LAWN: DL5 IRN: 4224679 [COUNT: 2201]

ITEMS SCHEDULED ('GYMNASIUM'):

Araucaria cunninghamii Aiton ex A.Cunn.
LAWN: DL10c IRN: 4062891 [COUNT: 973]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL10c IRN: 4224575 [COUNT: 1211]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL10c IRN: 4224612 [COUNT: 1201]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL10c IRN: 4224613 [COUNT: 1199]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL10c IRN: 4224614 [COUNT: 1200]
Araucaria cunninghamii Aiton ex A.Cunn.
LAWN: DL10c IRN: 4062892 [COUNT: 972]

	Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
	LAWN: DL10c IRN: 4224638 [COUNT: 1198]
	Pinus roxburghii Sarg.
	LAWN: DL10c IRN: 4024157 [COUNT: 943]
ITEM SCHEDULED (SINGLE OUTLIER):	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla***
	LAWN: DL10a IRN: 4224510 [COUNT: 1219]
ITEMS SCHEDULED (NORTHERN GROUP):	***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh.
	LAWN: DL12 IRN: 4223417 [COUNT: 1054]
	Lophostemon confertus (R.Br.) P.G.Wilson& J.T.Waterh.
	LAWN: DL12 IRN: 4220077 [COUNT: 1053]
	Podocarpus elatus R.Br. ex Endl.
	LAWN: DL12 IRN: 4079598 [COUNT: 927]
	Harpephyllum caffrum
	LAWN: DL12 IRN: 4043909 [COUNT: 949]
	Phoenix canariensis Hort. ex Chabaud
	LAWN: DL12 IRN: 4220044 [COUNT: 740]
ITEMS SCHEDULED (NORTHERN GROUP-OUTLIERS):	***Ficus virens*** Aiton **var. *virens***
	LAWN: DL12 IRN: 4112877 [COUNT: 935]
	Eucalyptus maidenii F.Muell.
	LAWN: DL11 IRN: 4025476 [COUNT: 934]
	Eucalyptus globulus Labill.
	LAWN: DL11 IRN: 4025468 [COUNT: 1032]

Statement of significance

This mixed species avenue (Central Avenue), believed to date from the 1850s, is possibly the city's second oldest avenue plantation still in existence (noting the three remnant swamp mahoganies *(Eucalyptus robusta)* planted in 1816 in the Royal Botanic Garden, which is the oldest remaining street tree plantation in Australia). Early individual specimens occurring within Central Avenue plantation are also likely to make this one of the oldest avenue plantations in Australia.

The avenue represents a distinctive thematic approach pursued by Charles Moore (Director, Botanic Gardens 1848-96) and possibly initiated by his predecessors James Kidd, Acting Superintendent (1844-47) and J.C. Bidwill, Director of the Botanic Gardens (1847) in the establishment of Fig-tree avenue (no longer extant). The planting palette was based on newly discovered native broadleaf evergreen species collected from east coast rainforests and imported exotics (particularly the Mediterranean basin). The approach was later to become the model for many of the city's public parks and open spaces.

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Statement of significance (continued)

The plantation is dominated by Moreton Bay fig *(Ficus macrophylla)*. These trees provide a dramatic sense of place with their immense scale, massive buttressed bases and broadly spreading crowns. The avenue was originally designed as a major entry point to the Botanic Garden linking to Hyde Park. A portion of this former avenue is still extant in Hyde Park (remnant Moreton bay fig avenue).

Notably, the plantation still includes Port Jackson fig *(F. rubiginosa)* and native rainforest species such as crow's ash *(Flindersia australis)* and single specimen plantings of Kauri pine *(Agathis robusta)* and white fig *(Ficus virens),* all of which are substantial specimens of significant proportions and scale dating from the early 1850s period. These species were first collected during expeditions by Cunningham/ Fraser to Moreton Bay (1828) and Bidwill in the Maryborough region (1849). Other native rainforest species such as *Grevillea robusta, Dysoxylum* sp. (possibly *D. fraserianum*) and *Heritiera* sp. together with exotics *Harpephyllum caffrum, Cinnamomum camphora*, *Ginkgo biloba*, *Ceratonia* sp. (likely *Ceratonia siliqua*) were all present in the plantation around the turn of the century (Jones, 1903). Of the exotics, only the *Harpephyllum caffrum* and *Cinnamomum camphora* are still extant from this period.

J.H. Maiden (Director, Botanic Garden 1896-1924) noted in the Annual Director's Report that by 1899 the avenue had become quite open with the loss of many of the trees (Maiden, 1900). Jones/ Maiden added an eclectic mix of thirty (30) young trees including native and exotic species. The approach essentially retained and reinforced the original design intent of a dense evergreen canopy and deeply shaded walkway. Replacement planting included brush box *(Lophostemon confertus)* and Canary Island date palm *(Phoenix canariensis)*. Further replacements were added in subsequent years (1907; 1912).

This iconic avenue retains important associations with the work of both Charles Moore and J.H Maiden, former directors of the Royal Botanic Garden, Sydney. The avenue continues a mid-to late Victorian and Edwardian theme in its use and dominance of large evergreen broadleaf species, particularly the figs. The landscape character draws on material sourced from early botanic expeditions to east coast rainforests as well as a global trade and exchange of exotic species, here focussing on dense-canopied evergreen species from China, South Africa and the Canary Islands.

Continued over page

Statement of significance (continued)

The density of planting within the avenue together with the broadly-spreading branching pattern of the figs ensure a more or less continuous canopy over the walkway. The massive structural character of these trees create a memorable landscape quality of enclosure whilst retaining significant vistas along the main axis and across the Domain to the western city skyline and the Art Gallery of NSW to the east. Notably, the scale and character of this plantation are comparable to the avenue of Hill's Weeping Figs in Hyde Park, the latter planted in the early 1930s. The historic thematic approach taken in Central Avenue has played a highly influential role in shaping the landscape character and aesthetic quality of much of Sydney's public open spaces. Accordingly, the Central Avenue plantation, including the 'gymnasium' group, is assessed as having exceptional heritage significance.

Individual specimens – exceptional significance

A single *Agathis robusta* (Queensland kauri pine) located within the eastern row of the avenue is an outstanding individual specimen tree. This native rainforest conifer has achieved substantial proportions and scale. It is believed to be a component of the original mixed plantation and shares a similar overall size (height: 31 metres; canopy spread: 16 metres; dbh: 1.05 metres) as the *Agathis robusta* planted in 1853 in the Botanic Garden (Bed 28a – historic palm grove). The latter pine was the first of this species to be planted in the Gardens and is the ''type" specimen. It is believed to have been collected by J. C. Bidwill (first Director, Botanic Gardens) 1st January 1849 on the site of the future city of Maryborough, Queensland. Charles Moore collected seeds and plants in the Wide Bay area in 1854 (Mabberley 2002). This tall-growing species has remained a signature planting in public parkland and larger private gardens since the latter part of the nineteenth century. It continues to be planted within city parks, contributing to a lush, subtropical thematic palette. This specimen in the Domain is likely to be one of the oldest in cultivation and is considered to be of exceptional significance.

Three specimen *Flindersia australis* (Australian teak) located within the western row of the avenue are believed to be original components of this 1850s planting scheme. Each of these trees are outstanding individual specimens of substantial scale (height: 23.5-25 metres; canopy spread: 22-24 metres; dbh: 1.10-1.14 dbh). Together they comprise the majority of planting in the western row and make a considerable contribution to visual and aesthetic character. Charles Fraser notes that this species was newly collected from "Moreton Bay" south-eastern Qld and introduced to the Gardens in 1828 (Fraser, 1828?). These trees are likely to be seedlings of this earliest collected material sourced from Brisbane River during the 1828 Cunningham and Fraser expedition.

Continued over page

Statement of significance (continued)

'Gymnasium' group – exceptional significance

The 'gymnasium' group refers to the informal grove of trees dominated by five *Ficus macrophylla* (Moreton Bay figs) encircling the western side of the former 'gymnasium' (i.e. children's playground) adjacent to Central Avenue. The gymnasium was established in 1902 (Maiden 1903). Today these trees have attained dramatic proportions and scale with extensive interlocking canopies. Historically, they are an integral part of the Central Avenue plantation. Although Maiden noted in the Annual Report (1900) that the avenue had lost many of its original trees, in 1903 Maiden refers to the gymnasium as *"well-shaded by full-grown Fig and other trees"* (Maiden 1903). It is believed that the figs were planted in the 1850s-1870s as part of a broader shade tree planting program in the Domain. The group also includes two emergent *Araucaria cunninghamii* (hoop pine) which are later additions (possibly 1880s-1890s) and a single *Pinus roxburghii* (Himalayan or chir pine). The pine has a plaque suggesting a planting date of 1940s however Jones (1903) notes this specimen tree [syn. *Pinus longifolia*] in his plan of the southern portion of the Domain [Phillip Precinct]. Unlike many other exotic conifers planted during this period, *P. roxburghii* has been particularly successful in the Domain. It is believed that this specimen is an early planting in this location, possibly 1850s-1860s.

Northern avenue group – high significance

The northern portion of the avenue and historic entry point to the Botanic Garden retains a small group of specimen trees including two *Lophostemon confertus* (brush box), *Harpephyllum caffrum* (kaffir plum), *Podocarpus elatus* (plum pine) and *Phoenix canariensis* (Canary Island date palm). This group was established during the period 1899-1912 (Maiden 1900; Maiden 1912). These early twentieth century additions have contributed to the highly eclectic palette we see today in Central Avenue.

Since construction of the Cahill Expressway (completed in 1962) this northern avenue group has been further alienated from the main avenue plantation. The old avenue trees are now almost totally concealed by three *Ficus benjamina* (weeping figs) planted in the late 1960s-70s. In recent decades native species have been planted adjacent to this group further impacting on its associational and integrity values. In terms of visual, aesthetic and representative values none of the historic trees and palm have achieved notable size, form, scale or stature. Nevertheless, the kaffir plum is an unusual specimen – storm-damaged with a broken, uneven crown it has greatly extended lateral branches hanging to the ground. It appears that periodic waterlogging of this low-lying location has made it difficult to establish trees in this location.

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Statement of significance (continued)

Outliers – very high significance

Notably, a massive specimen *Ficus virens* var. *virens* (white fig), listed as an outlier in this avenue/ northern group, is an outstanding example of this taxa. It is likely to date from the 1850s-1870s. An aerial photo image taken in 1943 shows this particular tree with a 22 metres canopy spread. Over the past 72 years it has almost doubled its canopy diameter. This tree has a typical broadly-spreading canopy with CS: HT ratio of 1.8:1 (height: 20 metres; canopy spread: 36 metres; dbh: 2.50 metres) compared to the taller vertically upright branching structure of the *Ficus virens* var. *virens* (similar age) found in the eastern row of Central Avenue. The latter specimen has a CS: HT ratio of 0.8:1 (height: 30 metres; canopy spread: 25 metres; dbh: 1.90 metres) is closely planted between the competing canopies of two Moreton Bay figs. Jones (1903) plan indicates the presence of at least one other white fig planted as an outlier/ off-set from the avenue and no longer extant (Jones 1903). This single specimen makes an important contribution to visual and aesthetic character and is considered to have high individual heritage significance in this context.

Outliers – moderate significance

A single *Eucalyptus maidenii* [syn. *E. globulus* ssp. *maidenii*] (Maiden's gum) located on the rise (Lawn DL11) between the Cahill Expressway cutting and the restaurant (1 Art Gallery Road) appears to be an old specimen. It was considered to be an early 20th century planting (i.e. possible associations with Maiden's Eucalypt plantings in the Domain) however an aerial photo image taken in 1943 shows no tree in this location. This Eucalypt is likely to be a Post-war period planting (late 1940s-1950s). It is now affected by *Armillaria* sp. and in decline. A single mature *Eucalyptus globulus* (Tasmanian blue gum) occurs at the far western end of this lawn (DL11). This is believed to be a similar aged specimen and possibly planted at the same time to demonstrate differences between these species. Both Eucalypt species have close affinities. *E. maidenii*, long considered a subspecies of *E. globulus,* was recognised in the Australian Plant Census (APC) as a distinct species in 2006 (CHAH, 2006). These two trees have been assessed as having moderate significance in this context.

Other items

A second off-set row (western edge of avenue) includes immature specimens which in time, may achieve heritage significance. An immature *Taxodium mucronatum* (Mexican cypress) commemorates the 150th anniversary of the Inaugural first-class game of cricket in NSW held in the Domain (1857). Notably, this relatively recent commemorative planting (2007) is wild collected but is not considered to have heritage significance at this stage.

Physical description	Avenue plantation of mixed broadleaf tree species dominated by figs and other east coast rainforest species with other lesser exotic components.
Historic background	The Central Avenue plantation is believed to date from the early Moore period, possibly early 1850s. The Domain (Phillip Precinct) was still predominantly a natural landscape dominated by Eucalypt woodland including species such as *Eucalyptus racemosa, E. tereticornis and E. pilularis*. The avenue (a major entry point to the Gardens) was planted with Moreton Bay Figs *(Ficus macrophylla)* and a mix of other rainforest taxa including *Ficus rubiginosa, Ficus virens, Flindersia australis, Agathis robusta, Grevillea robusta, Dysoxylum* sp. (possibly *D. fraserianum*) and *Heritiera* sp. Moore later referred to these trees as those which *"constitute the brush or jungle forest of our Coastal Districts"* (Moore, 1871). At least one of the Port Jackson figs *(Ficus rubiginosa)* may have been planted in the early 1850s (see B/W photo taken c.1890, Daniel Solander Library RBGS). Ornamental evergreen exotics such as *Harpephyllum caffrum, Cinnamomum camphora*, *Ginkgo biloba* and *Ceratonia* sp. were likely mixed with the native taxa. Exotic pines such as *Pinus pinea, P. pinaster* and *P. halepensis* were also likely components within the early scheme. These species were typically planted in the Domain during the nineteenth century but are no longer extant. It is possible that additional figs and other tree species were planted as replacements during the period 1860s-1890s. Some of the existing brush box *(Lophostemon confertus)*, relatively small in stature, were possibly planted during this early phase (between existing Moreton Bay figs). These trees have struggled under the dense shade and competition of the figs. The Moriarity plan (1861) shows a degree of formality in the planting layout along this footpath. The symbols suggest a cultural landscape rather than the more generic and ubiquitous natural "brush" symbol rendered throughout much of the Outer Domain. This plan lends support for the existence of an avenue dating from the 1850s. Furthermore, the avenue symbols reflect a mixed character of either exotic pines or Araucarias as well as trees (*Ficus* spp.) rather than a single species avenue. Notably, the *Agathis robusta* specimen in this avenue group is of a similar size and dbh as the type specimen planted in 1853 in the Botanic Garden (Bed 28a – historic palm grove). Two other avenues (no longer extant) existed in the Outer

Domain before this date, being Oak-tree Avenue established before 1842 (later Hospital Road) and Fig-tree Avenue in 1847. Both of these avenues were originally mixed species plantations (Maiden, 1924).

In 1903 Jones prepared a sketch plan (in response to proposed development) showing existing trees within the southern portion of the avenue (Jones, 1903). Many of the scheduled trees are still extant. An image taken c.1890 titled "View from the Domain Entrance along Art Gallery Road. Children's gymnasium on left. Robbie Burns Garden and statue on right" (IMG 015909 Daniel Solander Library, RBGS) clearly shows the dark trunks and canopies of a Port Jackson fig *(Ficus rubiginosa)* and crow's ash *(Flindersia australis).* Both of these trees are of substantial size and scale suggesting an age structure of 30-40 years. The two trees are extant specimens in this plantation. The Port Jackson fig has a plaque identifying a planting date as "early 1850s". Notably, the crow's ash is one of three specimens (of taxa) in this plantation of similar age structure.

Although the plan prepared by Jones suggests the avenue may have been designed (or re-designed) as an allée (i.e. double row plantation each side of walkway) it is more likely that it was supplemented in later years with additional off-set (informal) planting. The terminal feature along this walkway was a fountain located at the entrance to the Botanic Garden. Additional planting, dominated again by figs, was added to the upper eastern slope adjoining Art Gallery Road. This informal plantation created a "natural wooded glade" affording welcome shade for visitors. It also framed views and extended the visual influence of the avenue plantation.

Additional planting along Central Avenue was undertaken in 1899 and early 1900s period. Maiden notes in the annual report (1900) that *"the avenue from St. Mary's gates to the main entrance of the Botanic Gardens had so many gaps that in places it did not deserve the name at all. During the year thirty (30) young trees were planted, 24 of which were enclosed with 'iron hurdle tree-guards' and the balance with wooden picket square fences; further tree and avenue plantings are in contemplation"* (Maiden, 1900, p.33). This work addressed significant gaps in the plantation. Nevertheless, in 1903 Maiden refers to the gymnasium area adjacent to Central Avenue as *"well-shaded by full-grown Fig and other trees"* (Maiden, 1903). An image taken

in 1907 shows the gymnasium with heavily-pruned maturing figs (Daniel Solander Library, RBGS images; also see Gilbert, 1986, p.124). Maiden also refers to the massive proportions of many of the Moreton Bay figs and a program of heavy pruning to encourage the growth of lawns (Maiden, 1907, p.26). The existing cluster of figs along the western side of the avenue identifies the location of the former gymnasium. Notably, the 1907 image also shows an immature hoop pine *(Araucaria cunninghamii)* [centre background] which is still extant.

Notably, a single specimen *Pinus roxburghii* (Himalayan or chir pine) located within the 'gymnasium' group was identified by Jones [syn. *Pinus longifolia*] in his 1903 plan of the southern portion of the Domain [Phillip Precinct]. By 1899, Maiden commented on the decline of a number of exotic conifer species and their susceptibility to pest attack but this species has been particularly successful in the Domain. It appears that unlike many of the other pines planted during this period, *Pinus roxburghii* has been particularly suited to local climatic and soil conditions. The Colonial Plants Database notes listing of *Pinus roxburghii* in the Catalogue of Plants cultivated at Camden Park 1843 [Author: Sir William Macarthur] (Mills 2010). In 1849 Charles Moore acknowledges the contribution by Macarthur of "many interesting species of plants" to the Gardens but this species is not specifically mentioned in Annual Reports until 1851 in a list of plants "sent" to other destinations (Moore 1851). It is believed that this specimen is an early planting in this location, possibly 1850s-1860s. It certainly pre-dates the existing plaque description by many decades.

Many of the trees planted by Jones/ Maiden in 1899 appear to have failed during the early years. Watering of young trees during periods of drought was an ongoing management issue, exacerbated by the loss of skilled labour during WWI. Two brush box *(Lophostemon confertus)* were planted during this phase as infill planting, some of which were replaced in 1907 (Maiden, 1908). In 1903 Maiden remarks on the entry point to the Upper Garden from the Domain: *"…by the iron gates opposite the fountain* [intersection of Central Avenue/ Fig-tree Avenue]; *the stone pillars bear the date 1873. The left and right of the entrance are flanked by a brush box (Tristania conferta, R. Br.)* [syn. *Lophostemon confertus*] *30 feet high."* (Maiden, 1903, p.10).

	It is possible that the presence of these two mature brush box may have initiated additional planting (infill) of brush box along Central Avenue 1899-1907. Two of these trees are still extant in the northern portion of Phillip Precinct (i.e. northern group). It appears they were part of a mixed plantation dating from this period including *Harpephyllum caffrum* (kaffir plum) and *Podocarpus elatus* (plum pine). In 1912 Canary Island date palms *(Phoenix canariensis)* were added to the plantation. These early twentieth century additions appear to have contributed to the highly eclectic palette of tree species we see today in Central Avenue. It appears that periodic waterlogging of this low-lying location has made it difficult to establish many trees in this location. In 1909 Jones refers to a permanent spring here *"on the low ground to the west of the Art Gallery, where a clear-water spring is perpetually flowing."* (Jones, 1909, p.29). In the 1924 Annual Report mention is made of the opportunity to fill, regrade and turf *"the low-lying portion of ground situated between the eastern boundary of the cricket ground and Central-avenue."* (Grant/ Maiden, 1924, p.5).

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). This mixed species avenue, dominated by Moreton Bay figs, is believed to date from the 1850s. It is possibly the city's earliest mixed avenue plantation still in existence and is likely to be one of the oldest avenue plantations in Australia.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). This avenue is likely to be one of the earliest examples of the work of Charles Moore, Director Sydney Botanic Garden (1848-1896) and the thematic approach was later replicated in many of the city's parks and open space. In 1899 and subsequent years Joseph Maiden, Director Sydney Botanic Garden (1897-1924) replanted further trees along the avenue reinforcing the original design intent.
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). This mixed broadleaf avenue has achieved dramatic proportions and scale. The trees create a distinctive sense of place within the Domain. Together the mixed palette of trees form a more or less continuous inter-locking canopy over the walkway framing views to the city

	skyline and Art Gallery of NSW. The scale of this avenue is comparable to the central fig avenue in Hyde Park.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). Some of the native rainforest tree species used in this planting scheme (including *Flindersia australis*, *Agathis robusta and Ficus virens* var. *virens*) may represent the earliest use of these taxa within a formal mixed avenue plantation.
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). This is an iconic avenue plantation bringing together a collection of native rainforest taxa, including relatively recent discoveries from the subtropical rainforests of the Illawarra, NSW north coast and south-eastern Queensland by botanists Fraser/ Cunningham (Brisbane River, 1828) and J.C. Bidwill (Maryborough region, 1849). The collection encapsulates the quality of Sydney's cultural landscape tradition and a distinctive planting palette dominated by massive figs. This avenue stands as one of the earliest examples of the thematic approach of Charles Moore and later embellishment by J.H Maiden.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Australian Tropical Herbarium, Australian Tropical Rainforest Plants, James Cook University, Cairns, online database (accessed 2015)

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Jones, J., 1903, Historical Maps & Plans, RBG (from C. Simpson) ML: *D121 (CY1708) MAP SHEET 59, *Plan of portion of Domain Showing proposed new Law Court Buildings encroachment in Domain and Consequent destruction of several established trees, and Plantations, 13 Oct. 1903*

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Mabberley, D.J., 2002, *The Agathis brownii case (Araucariaceae),* Telopea 9(4): pp.743-754.

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

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The NSW Heritage Manual guidelines were used in assessment of heritage items.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney

SCHEDULE 2

PRECINCT: PHILLIP (UPPER EASTERN SLOPE – ART GALLERY ROAD)

HERITAGE ITEM:	**FIG TREE GROVE – UPPER EASTERN SLOPE**
LEVEL OF SIGNIFICANCE:	**EXCEPTIONAL (MIXED GROUP)** **HIGH - EXCEPTIONAL (INDIVIDUAL ITEMS)**
LOCATION:	Domain – Adjacent to 'Pavilion on the Park'; and Upper lawns between Art Gallery Rd and Central Ave
LAWNS/ BEDS:	DL1a, D8d, D8e, DL12; and DL2a and DL3a
HERITAGE ITEM/ TYPE:	Landscape – informal grove, cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	c.1850s to1870s and possibly later additions
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED (NORTHERN GROUP):	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** BED: D8d IRN: 4224508 [COUNT: 1225] ***Ficus rubiginosa*** Desf. ex Vent. BED: D8e IRN: 4224678 [COUNT: 1116] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL12 IRN: 4224509 [COUNT: 1224] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL1a IRN: 4224551 [COUNT: 1222] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL1a IRN: 4224550 [COUNT: 1223]
ITEMS SCHEDULED (MIDDLE GROUP):	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224576 [COUNT: 1217] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL2a IRN: 4224577 [COUNT: 2292] ***Ficus macrophylla*** Pers. ex Desf. **Subsp. *macrophylla*** LAWN: DL2a IRN: 766935 [COUNT: 2293] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL2a IRN: 4224675 [COUNT: 1113] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL2a IRN: 4224650 [COUNT: 1114]

ITEMS SCHEDULED
(SOUTHERN GROUP):

Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL3a IRN: 766579 [COUNT: 1213]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL3a IRN: 4224642 [COUNT: 1205]
Ficus rubiginosa Desf. ex Vent.
LAWN: DL3a IRN: 4224647 [COUNT: 1112]
Olea europaea* subsp. *cuspidata (Wall. ex G.Don) Cif.
LAWN: DL3a IRN: 4112848 [COUNT: 2291]

Statement of significance

This informal grove of mature trees, dominated by the Moreton Bay fig *(Ficus macrophylla)* and to a lesser degree the Port Jackson fig *(F. rubiginosa),* plays an integral role in this landscape reinforcing an historic thematic approach and extending the visual influence of the Central Avenue plantation. The fig grove also provides a an important link with the avenue of Hill's Weeping Figs *(Ficus microcarpa)* along Art Gallery Road, framing views and creating a dramatic sense of place and scale.

This grove displays an informal layout reflecting the idea of a natural wooded glade as a picturesque backdrop or foil to avenue planting along the central pathway. It is believed to date from the 1850s to 1870s and represents a distinctive thematic approach popularised by Charles Moore (Director, Botanic Gardens 1848-96). The planting palette was based on two native broadleaf fig species collected from the Sydney region and east coast rainforests. The use of *Ficus* species represented a significant departure from the dominant open-canopied Eucalypts still common in the Domain during this period. Importantly the cultivated figs provided much needed shade in the developing parkland.

The thematic approach was later to become the model for many of the city's public parks and open spaces. Today in this space, the repetition of these magnificent trees, together with their dramatic scale, massive buttressed bases and broadly spreading crowns creates a memorable landscape of high visual and aesthetic quality. Furthermore, the density of planting together with the broadly-spreading branching pattern ensure a more or less continuous canopy linking the Central Avenue plantation to the fig avenue along Art Gallery Road.

Notably, the grove includes a single *Olea europaea* subsp. *cuspidata* (wild olive). This is a tree of extraordinary scale and proportions for this species (height: 20 metres; canopy spread: 27 metres; dbh: 1.30 metres) and is likely to pre-date the broader fig plantation (possibly 1840s-1850s). This tree is considered to have exceptional heritage significance as an individual specimen. Other plantings include an immature Red Cedar *(Toona ciliata)* however this specimen is not considered to be of significance at this stage.

Physical description	Informal grove dominated by figs, located between the formal avenue of figs in Art Gallery Road and mixed species plantation along Central Avenue.
Historic background	An image taken c.1871 from the St. James Church steeple looking east over the Domain shows significant planting in this location amongst a mature woodland of Eucalypts (likely including *Eucalyptus racemosa, E. tereticornis and E. pilularis*) (Caroline Simpson Library and Research Collection). The immature canopies of cultivated trees displaying dense, dark foliage are clearly visible as either individual specimens or groups within fenced-off areas. Fencing was necessary to protect establishing trees from cattle grazing in the Domain. The growing public interest in the Domain was highlighted in a Sydney Morning Herald article of 19th February 1867 regarding recent improvements. This article referred to planting of new ornamental shade trees to provide *"the fine shade in lieu of that afforded by wretched dying gum trees"* (see Maiden manuscript, 1924, p.258). Four years later Moore wrote: *"To replace these* [Eucalypts] *by others of more permanent growth has been an object steadily held in view for some years past. Towards this end, new plantations have been made, and isolated trees planted in situations where they would be likely to succeed; and unless this be continued, the Domains will not possess that shade so desirable in this climate, nor present that ornamental appearance which would naturally be expected in a place of such great public resort"* (Moore, 1871). The SMH article (1867) describes the Central Avenue plantation and other associated planting along the eastern rise: *"Along the footpath reaching from the Upper (or St. Mary's) Lodge to the beautiful water fountain opposite the gate to the Gardens and further to the eastward across the brow of the hill will be found thriving, duly guarded, specimens of the Ficus australis* [syn. *F. rubiginosa*] *F. macrophylla, Lophostemon australis* [syn. *Lophostemon confertus*], *Pinus pinea and P. halepensis, Grevillea robusta, Quercus Robur, Populus alba, Araucaria Bidwillii* (Bunya Bunya), *A. excelsa* [syn. *A. heterophylla*], *a Camphor Laurel and numerous others. Conspicuous in several places is the Pinus pinea and the stately Norfolk Island Pine, both of which with a broad-leaved tree of the Eucalyptus genus* [unknown sp.] *and the two kinds of 'Fig Tree' seem to flourish beyond all others."* (SMH

1867; quoted by Maiden, 1924, p.258). Most of these trees have since vanished from this location. Notably, the two fig species and brush box continue to "flourish".

In the Annual Report of 1871, Charles Moore discusses the landscape philosophy for the Gardens and the Outer Domain. Moore refers to the grounds being manipulated *"to render them as diversified in character, and as picturesque in appearance as those of any public establishment of the kind in this or, any other part of the World"* (Moore, 1871). Moore confirms his intent to alter the natural landscape of the Domain and construct a new designed landscape providing greater amenity. The changes would include the *"removal of barren, rocky irregularities and quarrying to establish open lawns (couch or buffalo grass) with clumped plantations, borders and specimen tree planting"* (ibid, 1871) demonstrating this shift in design philosophy and pursuit of a more picturesque landscape.

In the latter years of the nineteenth century there was growing public criticism of these large figs over their ubiquitous nature, their sombre dark foliage and deep shade affecting lawn growth. In 1905 Maiden refers to a major outbreak of fig psyllids *(Mycopsylla fici)* affecting almost all of the Moreton Bay fig population (330 trees). He describes it as an "unsightly pest" covering the under-side of the leaves with a "rubber-like exudation" (Maiden 1905). These trees are still seasonally affected by this pest causing significant defoliation. Jones refers to an extensive program of heavy tree-pruning in various parts of the Domain: *"Many of the Moreton Bay fig-trees, planted about fifty years ago,* [i.e. Jones suggests 1850s as a planting date for some of these figs], *have grown into massive proportions. A few have been carefully measured, and it is found that they have now a spread of branches 90 to 100 feet in diameter. The stems at 3 feet from the ground measure 10 feet circumference, and the heights vary from 50 to 80 feet"* (Maiden, 1907, p.26).

Since establishment of this picturesque "wooded glade" these trees have afforded welcome shade for many visitors. These mature trees form an outstanding group of exceptional significance framing views and creating a memorable sense of place within the Domain.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). This grove of mature figs is believed to date from the 1850s to 1870s and is representative of one of Sydney's oldest designed landscapes. The informal layout creates a 'natural wooded glade' of dramatic scale. The grove was designed as a picturesque backdrop to the formal avenue plantation along the central pathway.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). Together the layout of the grove and the planting palette drawing on native broadleaf fig species collected from the Sydney region and east coast rainforests represent a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The repetition, massive scale and proportions of these mature figs create a distinctive sense of place within the Domain. Together the trees form a more or less continuous inter-locking canopy framing views to the city skyline and Art Gallery of NSW. Many of these trees are outstanding individual specimens.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). A single specimen Wild Olive *Olea europaea* subsp. *cuspidata* has achieved significant proportions within this grove. It is likely to pre-date (possibly 1840s-1850s) the broader fig plantation (see individual listing). Furthermore, this tree is likely to be one of the oldest and largest specimens in the greater Sydney metropolitan area.
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). These mature figs encapsulate the quality of Sydney's cultural landscape tradition. The thematic approach became the model for many of the city's public parks and open spaces. The relatively high density of planting and scale of these figs create a memorable landscape setting of high visual and aesthetic quality.

Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Jones, J., 1903, Historical Maps & Plans, RBG (from C. Simpson) ML: *D121 (CY1708) MAP SHEET 59, *Plan of portion of Domain Showing proposed new Law Court Buildings encroachment in Domain and Consequent destruction of several established trees, and Plantations, 13 Oct. 1903*

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/>
[website accessed Jan-Jun 2015]

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HERITAGE ITEM:	**SOUTH-WESTERN GROUP & HOSPITAL ROAD**
LEVEL OF SIGNIFICANCE:	**EXCEPTIONAL (MIXED GROUP)** **HIGH – VERY HIGH (INDIVIDUAL ITEMS)**
LOCATION:	Domain – South-western lawns; and Hospital Road plantation (beds and lawns)
LAWNS/BEDS:	DL10d, DL6; DL7a, DL7b, DL7f, DL7i [NOTE: D3 & D4 listings are not included in schedule]
HERITAGE ITEM/ TYPE:	Landscape – informal grove, cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	c.1850s to1890s; 1900s to 1940s.
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED (SOUTH-WEST GROUP):	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10d IRN: 4224668 [COUNT: 1194] ***Taxodium mucronatum*** Ten. LAWN: DL10d IRN: 4037491 [COUNT: 940] ***Ficus elastica*** LAWN: DL10d IRN: 4044074 [COUNT: 941] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10d IRN: 4224611 [COUNT: 1202] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL6 IRN: 4220048 [COUNT: 727] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL6 IRN: 4224672 [COUNT: 1286] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL6 IRN: 4224670 [COUNT: 1287] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL6 IRN: 4224645 [COUNT: 1107] ***Ficus elastica*** LAWN: DL6 IRN: 4044073 [COUNT: 942] ***Ficus nymphaeifolia*** LAWN: DL6 IRN: 4112892 [COUNT: 958]

Ficus henneana
LAWN: DL6 IRN: 4024341 [COUNT: 960]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL6 IRN: 4224671 [COUNT: 1285]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL6 IRN: 4224641 [COUNT: 1290]
Ficus virens Aiton **var. *virens***
LAWN: DL6 IRN: 4112875 [COUNT: 938]
Podocarpus elatus R.Br. ex Endl.
LAWN: DL6 IRN: 4079597 [COUNT: 928]
Washingtonia robusta
LAWN: DL6 IRN: 4086170 [COUNT: 966]
Araucaria bidwillii Hook.
LAWN: DL6 IRN: 4039795 [COUNT: 968]

ITEMS SCHEDULED (HOSPITAL ROAD):

Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL7a IRN: 4224907 [COUNT: 1282]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL7b IRN: 4224908 [COUNT: 1284]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL7b IRN: 4224909 [COUNT: 1283]
Butia capitata
LAWN: DL7f IRN: 4026410 [COUNT: 955]
Butia capitata
LAWN: DL7f IRN: 4026409 [COUNT: 956]
Ficus macrophylla Pers. ex Desf. **subsp. *macrophylla***
LAWN: DL7i IRN: 4224915 [COUNT: 2169]

BEDS D3 & D4 are not included in RBGS schedule:
3 items:
1 No. *Ficus macrophylla* IRN: 4224910 [COUNT: 2166]
1 No. *Araucaria heterophylla* IRN: 4062901 [COUNT: 854]
1 No. *Ficus macrophylla* IRN: 4224911 [COUNT: 2167]

See Schedule 5 for following items in Lawn DL10a:
1 No. *Ficus macrophylla* IRN: 4224549 [COUNT: 1294]
1 No. *Ficus macrophylla* IRN: 784434 [COUNT: 2180]
1 No. *Araucaria columnaris* IRN: 4056362 [COUNT: 971]
1 No. *Ficus macrophylla* IRN: 4224506 [COUNT: 1296] known as the "Tree of Truth"

Statement of significance

This mixed grove of native and exotic evergreen trees, dominated by Moreton Bay figs, displays an informal layout reflecting the idea of a natural wooded glade. This mature group provides a more or less contiguous canopy linking with Central Avenue and fig grove groups (see SCHEDULES 1 and 2). The trees set a picturesque backdrop along the gently rising south-western boundary of the Domain. In effect, the group reinforces the precinct's qualities as a natural amphitheatre for events and acts as a visual foil to adjoining buildings in Macquarie Street. It is further significant in maintaining a visual link with the avenue of Hill's Weeping Figs *(Ficus microcarpa)* along Art Gallery Road, framing views and creating a unique sense of place and scale.

It is believed that the ten (10) listed Moreton Bay figs *(Ficus macrophylla),* the dominant components of this plantation date from the 1850s to 1870s. Maiden believed the Moreton Bay figs growing behind Sydney Hospital and the Royal Mint Building were planted in 1869 (Maiden, 1924, p.261). It is likely that the main group on lawn DL6 and DL10d include earlier plantings (1850s). These figs represent a distinctive thematic approach implemented by Charles Moore (Director, Botanic Gardens 1848-96). The use of dense-canopied evergreen trees ushered in a new approach and a significant departure from the earlier oak/ pine plantations and the dominant open-canopied Eucalypts still common in the Domain during this period. Importantly the cultivated figs provided much needed shade and amenity in the developing parkland.

This thematic approach was later to become the model for many of the city's public parks and open spaces. The repetition of a single outstanding species, namely the Moreton Bay fig, creates a memorable landscape of high visual and aesthetic quality. The massive buttressed bases and broadly spreading crowns of this taxa provide a dramatic sense of place. The mixed group including mature figs, plum pine, bunya pine, Mexican cypress and associated palms is assessed as having exceptional heritage significance in this context.

This group includes three pivotal specimen *Ficus macrophylla* (Moreton Bay figs), all of which have achieved substantial proportions and a dramatic sense of scale. These trees are amongst the largest specimen figs in the Domain (canopy diameters of 35-40 metres). Moreton Bay figs have the capacity to grow rapidly in their early years. These older specimens have changed little in canopy size since 1943 (SIX maps 2015). In 1943 the two largest figs (IRN: 4224668 and 4224672) in this group had a canopy diameter of 28-32 metres (now 37-40 metres).

Continued over page

Statement of significance (continued)

Individual specimens – high to very high significance

Apart from the dominant Moreton Bay figs, the group is further distinguished by the contrasting mix of *Ficus* spp. present. Within this group, other native figs include *Ficus rubiginosa, F. virens* and *F. henneana* as well as exotics including a single specimen *Ficus nymphaeifolia* and two *F. elastica*. The *Ficus henneana* [syn. *F. superba* var. *henneana*] has a plaque suggesting this tree was planted in 1930s however it appears to be a specimen of considerable age. This is one of the species commonly used in mixed fig plantations in city parks designed by Charles Moore. An aerial photo image taken in 1943 shows this particular tree with an 11 metres canopy spread (now 22 metres) (SIX maps 2015). No further records have been found for this specimen. The 1903 plan by Jones shows *Ficus cunninghamii* [syn. *F. virens*] as a key component of this mixed plantation however the existing expansive *Ficus virens* (white fig) at the centre of this group [Lawn DL6] is not evident in the 1943 aerial photo image. It appears that this large specimen is an early Post-war period planting. Nevertheless, it has become an integral component of this historic mixed plantation. All of the fig specimens in this group, including *F. virens* are considered to have high individual significance in this context.

The group also includes two old rainforest specimens near Hospital Road – *Podocarpus elatus* (plum pine) and emergent *Araucaria bidwillii* (bunya pine). These are both relatively large specimens for their taxa and are likely to be early components of the 1850s-1870s planting scheme rather than later infill planting under Maiden. Both trees are identified in Jones 1903 plan and are assessed as having high individual significance.

The *Ficus nymphaeifolia* is a rare specimen planting (height: 18 metres; canopy spread: 25 metres; dbh: 1.25 metres). One other specimen of this taxa, of similar age and size, is located in Bed No.35 in the Botanic Garden. It is listed in Maiden's 1903 Catalogue of the Botanic Gardens (see Historic Background). The Domain specimen is likely to be a mid-to late nineteenth century planting.

Two mature specimen *Ficus elastica* (rubber tree) in this group are believed to be much older than suggested in previous studies. This species is known for its rapid and robust growth. In the 1960s this species became briefly popular as an indoor plant before falling out of favour. In 1943 these figs (IRN: 4044074 and 4044073) had canopy diameters of 11 and 13 metres (now 27 metres and 28 metres respectively). A rare species from the Fiji Islands (originally growing in Sir William Macleay's garden in Elizabeth Bay) described as "*Ficus Bonnettii or*

Continued over page

Statement of significance (continued)

F. Bennettii (allied to *F. elastica*)" was planted in this location in 1913 (Maiden 1914). Specifically, a single *Ficus elastica* was planted in 1914 (Maiden 1915).

A single extant specimen *Taxodium mucronatum* (Mexican cypress) [syn. *T. mexicanum*] may have been planted around this time (c.1910-1914) or possibly earlier. Maiden refers to one specimen planted in 1906 *"near the old Museum"* (Maiden 1907). In 1943 this tree (now leaning away from the dense canopy of the neighbouring fig) had a canopy diameter of 8 metres (now 11 metres).

This group also includes miscellaneous palms dating from the early twentieth century (see following schedule for palm plantation [Bed D1a] near St. Mary's Gate dating from 1900 (Maiden, 1901). The *Phoenix canariensis* (Canary Island date palm) located near Central Avenue may have been planted at the same time as palms in the avenue plantation. Similarly, the single tall *Washingtonia robusta* (within the DL6 group) and two *Butia capitata* (Hospital Road verge adjacent to Sydney Hospital) are likely to date from this time or early Inter-war period. These palms are considered to have high individual significance.

It is believed that the immature plantations of *Ficus virens* (white fig), *Araucaria cunninghamii* (hoop pine), *Agathis lanceolata* and *Washingtonia robusta* will in time, make an important thematic contribution to this historically significant landscape. These species will also enhance diversity. At this stage, these immature plantings are not scheduled as significant items.

Refer to SCHEDULE 5 for olive grove and outliers adjacent to Hospital Road [Lawn DL10a], including three *Ficus macrophylla* (Moreton Bay fig) and a single *Araucaria columnaris* (Cook pine).

Physical description	Informal grove dominated by native figs and other rainforest species, located in the south-western portion of Phillip Precinct and adjacent to Hospital Road.
Historic background	An image taken c.1871 from the St. James Church steeple looking east over the Domain [now Phillip Precinct] captures a natural landscape in transition (The American & Australasian Photographic Company, c.1871. Mitchell Library, State Library of New South Wales PXE 709). A mature woodland of native Eucalypts (including *Eucalyptus racemosa, E. tereticornis and E. pilularis*) still dominates this landscape however new cultural elements are appearing. In the foreground (behind the Mint

Building) an English oak (*Quercus robur)* and pine plantation (possibly *Pinus halepensis*) is clearly visible (known as Oak-tree Avenue – later Hospital Road). In the lower middle ground (south of the cricket pitch) a small group of *Salix babylonica* (weeping willows) is evident. Amongst the native woodland trees, immature canopies of cultivated trees exhibit dense, dark foliage within fenced-off areas. All of the natural understorey has been cleared and regrowth is browsed by wandering livestock.

In 1924 Maiden refers to this oak plantation as *"the first clump of young trees planted in the Outer Domain (a few had been planted previously, but not very many)…They were planted during 1845."* (Maiden, 1924, p.251). This planting date suggested in 1906 by the Hon. John Macintosh to J.H. Maiden would place it under the direction of James Kidd, Acting Superintendent (1844-47). Notably, when Charles Moore re-designed the avenue in Hyde Park in 1857 he retained some surviving English oaks whilst replanting with *Ficus macrophylla* (Moreton Bay figs) (some of which are extant) and alternating with *Pinus halepensis* (Aleppo pine) (Morris, pers. comm., 2015. The oak avenue in Hyde Park was an earlier planting under Allan Cunningham (1837). It is believed that Oak-tree avenue in the Domain can also be attributed to Cunningham (ibid. 2015). The planting of 'Bourke's Avenue' in Hyde Park was described as *"the first attempt at ornamental planting for the public on a large and expensive scale…since the foundation of the Colony"* (The Sydney Monitor 22 December 1837, p.3). This article congratulates Mr Anderson as the "planter" (not Cunningham) and is believed to be a reference to James Anderson Assistant Superintendent of the Botanic Gardens (1835-1838) and Superintendent (1838-1842).

A photo taken c.1871 shows this avenue of mature oaks. In the foreground there is a mature pine (NOTE: Mitchell Library, Small Picture File provides a date c.1871 however c.1890 is given for this image SH 609 Sharkie collection, Daniel Solander Library images Barcode No. 015110). It is believed that c.1871 may be more accurate. Notably, the image also shows younger pines and immature Moreton Bay figs in the background. The plantation of oaks and pines is no longer extant.

Maiden's 1924 Manuscript refers to an article in the Sydney Morning Herald dated 19th February 1867 which reviewed

recent improvements in the Domain under the direction of Charles Moore. Some of the SMH descriptions are relevant to this portion of Phillip Precinct: "To the west and to the south of the cricket ground, choice trees have been planted and carefully fenced round…" (SMH 1867) to protect against wandering animals including goats (Maiden, 1924, p.258). The SMH article also described the planting of new ornamental shade trees to provide *"the fine shade in lieu of that afforded by wretched dying gum trees"*.

Moore later wrote: *"To replace these* [Eucalypts] *by others of more permanent growth has been an object steadily held in view for some years past. Towards this end, new plantations have been made, and isolated trees planted in situations where they would be likely to succeed; and unless this be continued, the Domains will not possess that shade so desirable in this climate, nor present that ornamental appearance which would naturally be expected in a place of such great public resort"* (Moore, 1871). In the same year Charles Moore confirmed his intent to alter the natural landscape of the Domain and construct a new designed landscape providing greater amenity. The changes would include the *"removal of barren, rocky irregularities and quarrying to establish open lawns (couch or buffalo grass) with clumped plantations, borders and specimen tree planting"* (Moore, 1871). By the late 1870s the native Eucalypt woodland in the Domain [Phillip Precinct] was giving way to a vastly altered environment: *"The Eucalypts and other native trees in the Domain are fast dying out and will soon disappear altogether in that part towards the city; but on the eastern side very many of these are still in good health and will in all probability survive for many years"* (Moore, 1879).

In the 1879 Annual Report, Charles Moore noted: *"the work of replanting the Domains with trees of a permanent umbrageous character, commenced a good many years ago, and has been steadily continued ever since. Most of the earlier planted trees now give excellent shade, and add greatly to the ornamental appearance of this favourite public resort"* (Moore, 1879). The oldest extant species in this plantation demonstrate that the thematic approach pursued by Charles Moore borrowed heavily on early botanical discovery and introduction of material from the subtropical rainforests of the Illawarra, NSW north coast and south-eastern Queensland, including the expeditions of Fraser/ Cunningham (Brisbane River, 1828), Petrie (Bunya

Mountains, 1839) and J.C. Bidwill (Wide Bay, 1849). Moreton Bay figs (*Ficus macrophylla*) became a keystone species in this planting palette. This dominant fig and other rainforest species were inter-mixed with a broad range of exotic taxa introduced from other parts of the world including *Cedrus, Quercus, Pinus, Taxodium, Cinnamomum, Washingtonia, Phoenix* spp. Many of the exotic species were added during the early twentieth century under J.H. Maiden.

In 1879 Moore provided a review of the tree species which had proved most adaptable to the conditions found in the Domain: *"Originally very many different kinds of trees were tried in this exposed place, but only a few of these have succeeded well, principally Ficus macrophylla, Desf., commonly but erroneously called the Moreton Bay Fig, as if it were only found in that part of Australia, whereas it is indigenous to the eastern coast districts, from the Illawarra in this Colony to Rockhampton in Queensland, Ficus syringaefolia, Cunn., (or deciduous fig)* [syn. ?*F. henneana*], *Ficus ferruginea, Desf., (or native fig)* [syn. F. rubiginosa], *Tristania conferta, R. Br. or Lophostemon australis (the bastard box of Colonists), Laurus camphora W., or camphor laurel, English oaks, elms, poplars, plane, Pinus Pinea, L., Pinus halepensis, Ait., Pinus longifolia, Rox*. [syn. P. roxburghii], *Araucaria excelsa, R. Br.,* [syn. *A. heterophylla*], *Araucaria Cunninghamii, Ait., Salix babylonica, L. weeping willow, planted in most places, and several varieties of the common olive, Olea europea, L."* (Moore 1879).

Moore continues: *"These, planted singly or in groups, appear to stand well exposure to the strong sea breeze and to dry hot winds to which they are often subjected, and for which cause many other sorts of trees planted out here have perished altogether"* (Moore 1879). Most of these species, in particular the native figs and Araucarias, brush box, camphor laurel, chir pine and olives have proven to be adaptable and long-lived whereas others including exotics such as English oaks, elms, poplars *Pinus* spp. have not been so successful.

In 1903 a plan prepared by Jones identified tree species and locations in this part of the Domain in response to proposed development (south of the old 'Mining Museum' formerly the Technological Museum). The lawn area now identified as DL6 was planted with a broad range of exotic evergreen and deciduous tree species which are no longer extant. These tree

species included *Cedrus deodara, Pinus pinea, P.* insignis [syn. *P. radiata*], *Laurus camphora* [syn. *Cinnamomum camphora], Quercus incana, Q suber* and other *Quercus* spp.

Native conifers such as *Araucaria excelsa* [syn. *A. heterophylla*], *Dammara* moorei [syn. *Agathis moorei*] and *D. robusta* [syn. *Agathis robusta*] have also disappeared. Notably, a single tall, *Araucaria bidwillii* (bunya pine) and *Podocarpus elatus* (plum pine), shown on the Jones plan, are extant and may date from the late 1850s-1860s.

This plantation (or arboretum) has been subject to successive overlays since the mid-nineteenth century demonstrating a long history of embellishment, particularly within its varied population of mature native and exotic figs (*Ficus* spp.). For example, the single specimen *Ficus nymphaeifolia* (Mill.) located in this group is a rare planting. Maiden lists another specimen (same taxa) in the 1903 Catalogue of the Gardens located in Middle Garden Bed No.8 (M-8) [i.e. Bed No.35 adjacent to the present succulent garden] (Maiden, 1903, p.25). Both trees are of similar size (canopy diameter and dbh) and believed to be similar age, possibly mid-to late nineteenth century.

The dominant *Ficus macrophylla* and other species such as *F. rubiginosa* and *Ficus henneana* are also believed to be of a similar age cohort. The 1943 aerial photo image suggests planting of the *F. henneana* during the late-nineteenth century (SIX maps 2015). Other figs have been added to the group during the early twentieth century including two specimen *Ficus elastica* (rubber tree). Jones/ Maiden refers to the planting of this species in this location (Maiden 1915). The large specimen *Ficus virens* was planted after 1943 (SIX maps 2015).

In the 1924 Manuscript J.H. Maiden quotes from a letter received in 1906 from the Hon. John Macintosh: "Figs at the back of the Hospital and the Mint were planted during 1869" (Maiden, 1924, p.261). This letter describes preparation of the tree pits. Two trees located within the group [Bed D3] behind the Mint Building and possibly dating from 1869, a *Ficus macrophylla* and *Araucaria heterophylla* are not scheduled in the RBGS database and are therefore not included in this study.

The old "Mining and Geological Museum" (formerly the Technological Museum) described by Maiden as *"a large ugly*

galvanised building at the back of the Sydney Hospital" and *"better known as the old 'Mining Museum'* [see 1903 Jones plan] *was erected on the upper lawn adjoining Hospital Road as a temporary horticultural annexe to the Sydney International Exhibition of 1879-80"* (Maiden, 1924, pp.262-263). It stood for 35 years in this location before demolition in 1914 (Grant/ Maiden, 1915, pp.37-38). In 1916 Maiden refers to completion of remedial landscape works including regrading, ripping, topsoiling and turfing "under many difficulties attributable in part to circumstances arising out of the war" (Grant/ Maiden, 1916, p.4). Reference was also made to *"pruning and removal of several trees that had out-lived their usefulness"* (ibid 1916). Maiden immediately embarked upon a program of Eucalypt planting: *"Part of the area previously occupied by the Mining Museum was planted with several species of Eucalyptus, viz.:- E. calophylla (Red Gum of Western Australia), E. cladocalyx (Sugar Gum), E. melliodora (Yellow Box), E. microcorys (Tallow Wood), and E. robusta (Swamp Mahogany). A plant of Quercus virens was also planted near this spot"* (Grant/ Maiden, 1916, p.25). It is not known what became of this Eucalypt plantation. None of these trees exist today.

A further impact on the plantation during these years was the establishment of the 'Domain Anzac Buffet' (a temporary building for the use of soldiers) located *"at the rear of the 'Palmetum'* [Bed D1a – see listing] *near to the St. Mary's Road entrance*". It was opened in June 1916. Grant/ Maiden wrote: *"…upwards of an acre of ground has been enclosed for the purpose of games for the visitors"* (Grant/ Maiden 1917, p.11). In 1918 Maiden notes: *"here where the wounded and sick men are met…"* by relatives and friends and treated by Red Cross Voluntary Aids before returning home (Grant/ Maiden 1918; Garcia, M., pers., comm. 2015).

Over the past 100 years these trees have formed a magnificent back-drop to many popular events in the Domain. These heritage trees are an integral part of the historic, visual and aesthetic character of Phillip Precinct and the Domain.

In 2004 eleven mature trees, including five *Ficus macrophylla* (Moreton Bay figs), a Port Jackson fig, plane tree, tallowwood, swamp mahogany, camphor laurel and African olive were removed along Hospital Road. The trees were showing evidence of extensive decay and potential failure in major

	branches (SMH 14th April 2004). These trees have been replaced with *Ficus virens* (white fig) *Araucaria cunninghamii* (hoop pine), *Agathis lanceolata* and *Washingtonia robusta* (Mexican fan palm). Refer to schedules. In time these replacement trees will significantly enhance the heritage qualities of this precinct.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). The key components of this grove of mature trees (dominated by Moreton Bay figs) is believed to date from the 1850s to 1870s. The group is representative of one of Sydney's oldest extant cultural landscapes.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The planting palette drawing largely on native broadleaf fig species collected from the Sydney region and east coast rainforests represents a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96). The use of dense-canopied evergreen trees ushered in a new approach and a significant departure from the earlier oak/ pine plantations and the dominant open-canopied Eucalypts still common in the Domain during this period. The plantation was further modified and embellished by Joseph Maiden, Director Sydney Botanic Garden (1897-1924).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The repetition, massive scale and proportions of these mature figs and other trees create a distinctive sense of place within the Domain. This mature group provides a more or less contiguous canopy linking with Central Avenue and fig grove groups (see SCHEDULES 1 and 2). The trees set a picturesque backdrop along the gently rising south-western boundary of the Domain.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). This group includes an unusual mix of native and exotic figs (*Ficus* spp.). The single *Ficus nymphaeifolia* is a rare specimen planting.
Representativeness	An item is important in demonstrating the principal characteristics of a class of

SHR criteria (g)	NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). This mixed group of trees is dominated by native rainforest taxa. The composition draws on early botanical discovery and introduction of material from the subtropical rainforests of the Illawarra, NSW north coast and south-eastern Queensland, including the expeditions of Fraser/ Cunningham (Brisbane River, 1828), Petrie (Bunya Mountains, 1839) and J.C. Bidwill (Wide Bay, 1849). The thematic approach became the model for many of the city's public parks and open spaces.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Council of Heads of Australasian Herbaria, *Biographical Notes* (extracted from A.E. Orchard (1999) *A History of Systematic Botany in Australia*, in Flora of Australia Vol.1, 2nd ed. ABRS <http://www.cpbr.gov.au/biography/anderson-james.html> [website accessed 15 June 2015]

Council of Heads of Australasian Herbaria, *Biographical Notes* (extracted from A.E. Orchard (1999) *A History of Systematic Botany in Australia*, in Flora of Australia Vol.1, 2nd ed. ABRS <http://www.cpbr.gov.au/biography/cunningham-allan.html> [website accessed 15 June 2015]

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Jones, J., 1903, Historical Maps & Plans, RBG (from C. Simpson) ML: *D121 (CY1708) MAP SHEET 59, *Plan of portion of Domain Showing proposed new Law Court Buildings encroachment in Domain and Consequent destruction of several established trees, and Plantations, 13 Oct. 1903*

Land and Property Information, SIX maps 2015

https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney
SCHEDULE 4
PRECINCT: PHILLIP (PALM GROVE)

HERITAGE ITEM:	**PALM GROVE (ART GALLERY RD/ HOSPITAL RD)**
LEVEL OF SIGNIFICANCE:	**HIGH (MIXED GROUP)** **NO SCHEDULED INDIVIDUAL ITEMS**
LOCATION:	Domain – Palm grove plantation (bed) corner of Art Gallery Road and Hospital Road
BEDS:	D1; D1a; D1b
HERITAGE ITEM/ TYPE:	Landscape – informal grove, cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	1900; incl. later additions
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
NO SPECIFIC ITEMS SCHEDULED:	***Archontophoenix alexandrae*** (F.Muell.) H.Wendl. & Drude (2No.) ***Archontophoenix cunninghamiana*** (H.Wendl.) H.Wendl. & Drude (3No.) ***Howea belmoreana*** (C.Moore & F.Muell.) Becc. (21No.) ***Howea forsteriana*** (C.Moore & F.Muell.) Becc. (11No.) ***Livistona australis*** (R.Br.) Mart. (1No.) ***Livistona chinensis*** (Jacq.) R.Br. ex Mart. (1No.) ***Phoenix canariensis*** Hort. ex Chabaud (2No.) ***Phoenix reclinata*** Jacq. (6No.) ***Phoenix sylvestris*** (2No.) ***Trachycarpus fortunei*** (3No.) ***Washingtonia filifera*** (1No.) ***Washingtonia robusta*** (2No.)

Statement of significance

This palm grove [incl. Beds D1, D1a, D1b] was established in 1900 under the direction of J.H. Maiden (Director, Botanic Garden 1896-1924). It was designed as a *"small but important plantation"* – a focal point and entry statement to the Domain "*directly opposite the principal entrance of the Domain at St. Mary's gate*" (Maiden 1901).

Continued over page

Statement of significance (continued)

The original design intent *"consist[ed] of palm-trees and roses"* (ibid 1901) combining both 'palmetum' and 'rosarium' in this location as part of a broader enhancement of *"the picturesque Outer Domain"* (Maiden 1901; Garcia, M., pers. comm., 2015). By 1903 a Rosarium had been established on the eastern side of Art Gallery Road (north of Domain Lodge). Although the roses have disappeared from the 'Palmetum', this triangular-shaped bed still retains an eclectic mix of native and exotic palm species as well as many other shrubs and trees. Although the palette appears to have been highly modified over the years with successive overlays of different plant species the group remains an iconic element in this location. The mixed palms create a memorable sense of place at this entry point to the Domain and continue to highlight Maiden's intention that Sydney should *"present a more semi-tropical aspect"* (Maiden, 1910, p.26).

Of the 70 scheduled palms, shrubs and trees in this plantation (RBGS 2015) *Howea belmoreana* (curly palm or sentry palm) and *H. forsteriana* (kentia palm) remain the dominant components with 21 and 11 specimens respectively. *H. belmoreana* is a very slow-growing species and mature specimens growing here may be components of the original plantation. Both taxa are endemic to Lord Howe Island and named by Charles Moore (Director, Botanic Gardens 1848-96). In 1869 Moore made a short visit to Lord Howe Island and collected seed from these and other palm species, which were passed on to Ferdinand von Mueller. The bed contains a broad mix of height classes from smaller palms (such as those listed above) to more robust and taller specimens including *Phoenix canariensis* (Canary Island date palm), *P. sylvestris* (silver date palm), *P. reclinata* Senegal date palm), *Washingtonia filifera* (desert fan palm) and *W. robusta* (Mexican fan palm).

This palm group pre-dates the mixed palm plantations near the Art Gallery and Fleet Steps in 1909. It is unclear as to whether any of the remaining palms date from the original plantation, with the exception of *Howea belmoreana* and possibly *H. forsteriana*). There are no individual listed items. Nevertheless, this plantation remains a key feature in the cultural landscape of the Domain adding a distinctively flamboyant, subtropical aesthetic. Furthermore, these palms have come to symbolise a distinctive thematic style pursued by Maiden during the Edwardian period (1901-1910). As a group entity, all of the palms are considered to have high significance in terms of historic, visual, aesthetic and representative values. The associated trees and shrubs, of varying age structure, are considered to play a positive and supportive role in this context however these items are not assessed as having further significance.

Physical description	Informal grove dominated by native and exotic palms and located within a triangular bed at the corner of Art Gallery Road and Hospital Road.
Historic background	In the 1901 Annual Report, Maiden noted that in the previous year: *"One small but important plantation has been made, which it is intended to consist of palm-trees and roses. This is directly opposite the principal entrance of the Domain at St. Mary's gate"* [Bed D1a] …*"iron hurdle fencing… has been erected around the Palm-tree corner"* (Maiden 1901; Garcia, M., pers. comm., 2015). In 1903 James Jones' plan shows this triangular-shaped planting bed in some detail. It consisted of a border planting and perimeter pathway with an entry point on the northern side. The outer path was linked to a small circular path at the centre of the bed. The plan was prepared in response to proposed new building works (Law Court Buildings). The proposed new road alignment was shown to cut through the centre of this bed. The works did not proceed. This palm group pre-dates the mixed palm plantations near the Art Gallery (see SCHEDULE 7) and Fleet Stairs (both locations were planted in 1909). In the Director's Annual Report, J.H. Maiden refers to the *"great emphasis placed on new palm plantations in 1909"* and describes the significance of this year *"in which very large additions were made to the palms already planted in the Domain"*. Maiden states his design intention for *"Sydney to present a more semi-tropical aspect, and the planting of palms will help this."* (Maiden, 1910, p.26). It is important to recognise that the two key species in this plantation *Howea belmoreana* and *H. forsteriana* have strong associations with Charles Moore. He also initiated significant plantings of these species in the Gardens long before this 'Palmetum' was established. Moore's Annual Report noted that the Gardens had been *"enriched further with recent planting of Kentia Forsteriana and Kentia Belmoreana…"* (Moore 1879). It is likely that the original palm plantation was impacted by development of the 'Domain Anzac Buffet'. A temporary building for the use of soldiers was located *"at the rear of the 'Palmetum' near to the St. Mary's Road entrance*" (Grant/ Maiden 1917). It was opened in June 1916 (ibid. 1917, p.11; Garcia, M., pers., comm. 2015). The mixed age structure of the

	plantation suggests a high level of modification throughout the twentieth century and in recent decades.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). This mixed palm grove was established in 1900 under the direction of J.H. Maiden (Director, Botanic Garden 1896-1924). The group is representative of one of Sydney's oldest extant 'Palmetums'.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The mixed palm plantation has important associations with the work of Joseph Maiden (Director, Botanic Garden 1896-1924) being the earliest known example of this thematic approach in the Domain. The dominant *Howea* spp. in this plantation were named by Charles Moore (Director, Botanic Gardens 1848-96) after a visit to Lord Howe Island in 1869.
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). This group of mixed palms are iconic elements located near St. Mary's Gate and key entry point to the Domain. They create a distinctive sense of place, underscoring Maiden's intention that Sydney should *"present a more semi-tropical aspect"* (Maiden, 1910, p.26).
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). This grove of mixed palms is representative of Maiden's strategy for Sydney to present a flamboyant, subtropical aesthetic based on a distinctive planting palette.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Jones, J., 1903, Historical Maps & Plans, RBG (from C. Simpson) ML: *D121 (CY1708) MAP SHEET 59, *Plan of portion of Domain Showing proposed new Law Court Buildings encroachment in Domain and Consequent destruction of several established trees, and Plantations, 13 Oct. 1903*

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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HERITAGE ITEM:	**OLIVE GROVE & MIXED SPECIES – OUTLIERS**
LEVEL OF SIGNIFICANCE:	**EXCEPTIONAL (OLIVE GROVE)** **HIGH – VERY HIGH (WESTERN OUTLIERS)**
LOCATION:	Domain – western lawn area (adj. to Hospital Road)
LAWN:	Phillip Precinct: Lawns DL10b and DL10a
HERITAGE ITEM/ TYPE:	Olive trees (group of five trees); Moreton Bay figs and Cook pine – Outliers Cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date(s):	See following details
Integrity:	High
Height/ Spread/ DBH:	Varies (see schedules)
Form/ Health:	Varies (see schedules)
ITEMS SCHEDULED (OLIVE GROVE)	***Olea europaea*** L. LAWN: DL10b IRN: 4112912 [COUNT: 983] ***Olea europaea*** L. LAWN: DL10b IRN: 4112914 [COUNT: 986] ***Olea europaea*** L. LAWN: DL10b IRN: 4112911 [COUNT: 987] ***Olea europaea* subsp. *cuspidata*** (Wall. ex G.Don) Cif. LAWN: DL10b IRN: 4112914 [COUNT: 984] ***Olea europaea* subsp. *cuspidata*** (Wall. ex G.Don) Cif. LAWN: DL10b IRN: 4112913 [COUNT: 988]
ITEMS SCHEDULED (WESTERN OUTLIERS):	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 4224549 [COUNT: 1294] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 784434 [COUNT: 2180] ***Araucaria columnaris*** (G.Forst.) Hook. LAWN: DL10a IRN: 4056362 [COUNT: 971] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL10a IRN: 4224506 [COUNT: 1296]

Statement of significance

Olive grove – exceptional significance

The olive group located on the gentle slope adjacent to Hospital Road [Lawn DL10b] in the north-western corner of Phillip Precinct is believed to be the earliest planting of any ornamental or fruit trees in the Domain. The planting date may be as early as the 1830s-1840s. It has been suggested that this group containing five olive trees (including three European olive varieties and two African olives) was originally located within the garden of a weatherboard cottage built as a residence for the gatekeeper. The cottage was subsequently used as a residence for James Kidd, Acting Superintendent 1844-47 (Sydney Morning Herald, 9th September 1897, p.4).

The Botanic Gardens played a vital role in establishing olives as a potential agricultural crop for the Colony. In 1828 Charles Fraser (Colonial Botanist and Superintendent of the Botanic Garden 1816-1831) in his *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 1,* produced a list of eleven (11) different types and varieties of Olive cultivated in the Botanic Gardens. These olives were introduced to the Gardens 1822-1825.

A number of inspections were made with respect to this group to establish varietal characteristics during preparation of the study (Jan-Jun 2015). The two African olives *Olea europaea* subsp. *cuspidata* (Wall. ex G.Don) Cif., are located on the south-western side of the group [IRN: 4112914 and IRN: 4112914]. Both trees were producing fruit during the study. It is suggested that there are three (3) different varieties of European or common olives *Olea europaea* L. in this group. No fruit was present in any of these trees however each specimen displays differences in leaf morphology. The tree located closest to Hospital Road [IRN: 4112914] displays an upright form and branching pattern with a medium-sized leaf (5.0-5.5 cm length; 0.8-1.0 cm width) and pale, glaucous upper side. The northern tree [IRN: 4112911] has a distinctly smaller, narrow elliptic leaf (3.0-4.0 cm length; 0.6-0.8 cm width) and upper side is a dull-green colour rather than glaucous. The eastern tree [IRN: 4112912], the largest in the group, has an open upright form with a broken, asymmetrical crown and poor vigour. It has a much larger leaf (5.5-7.5 cm length; 1.4-1.9 cm width) with a mid-green upper side. In the past one of the trees has produced small 'ligurian-type' fruit (Bidwell, D., pers. comm., 2015).

Further research is required to confirm a date for this early planting. It has been suggested that this grove is the source of fruit and "excellent" oil discussed in a letter from Macarthur in 1845 however there has been no evidence discovered to verify this claim (Mackenzie, A.,. pers. comm. with RBGS, 26th Nov. 2004).

Continued over page

Statement of significance (continued)

Nevertheless, the olive grove stands as a curious anomaly focussed on crop production rather than shade and ornamental embellishment. It is possible that the olive trees were established as an experimental group to test different varieties and cropping capabilities. A label attached to the eastern tree states that *"the grove is believed to have been planted about 1850"* however the purely functional role of this group to produce food and oil and its isolation suggests an earlier planting date. Although Charles Moore discusses his continuing interest in promoting olives in the Colony in the 1850s (see Annual Reports – Moore 1851; 1856; and 1857) his focus in the Domain was shifting towards shade amenity, aesthetics and the picturesque (see SCHEDULES 1, 2 and 3).

It appears more likely that this olive grove is associated with an earlier planting – the cottage garden of James Kidd. *"Kidd began as Assistant Overseer in 1830, Overseer 1833, Assistant Superintendent 1837, Acting Superintendent 1844-1847, back to Overseer in 1847-1866. As Overseer, Kidd was probably entitled to live in the old Overseer's Residence, 1816-1878. Though no illustration of the residence exists today, the residence does appear on several old maps"* (Garcia, M., pers. comm., 2015). This is an area of potential future research.

It is considered that this olive grove, including all five trees, has exceptional group significance in this context. The olive trees are representative of a distinctive phase in the Colony's history with a focus on production yield and oil quality rather than ornamental planting for shade, amenity and aesthetics. Each individual tree is considered to have very high heritage significance. Any further losses or gradual attrition of scheduled items would have a lasting detrimental impact on the grove's integrity and representative values.

It is important to ensure appropriate management procedures are implemented to enhance longevity of this group. For further discussion of the management of African olives *Olea europaea* subsp. *cuspidata* (Wall. ex G.Don) Cif., in this group (i.e. African olive as a declared noxious weed in NSW and scheduled as a Key Threatening Process in the TSC Act 1995) see notes in Historic Background.

Outliers (Moreton Bay figs & Cook pine) – high significance
Three *Ficus macrophylla* (Moreton Bay figs) and a single planting of *Araucaria columnaris* (Cook pine) located adjacent to Hospital Road (Domain Road) [Lawn DL10a] are likely to date from the 1860s-1890s period.

Continued over page

Statement of significance (continued)

Images taken in July 1913 of the old Mining Museum (Technological Museum) on Hospital Road show many mature Moreton Bay figs with expansive canopies (1914 Annual Report; images held in Daniel Solander Library RBGS Barcode 015915 and 015916). The three loosely clustered and scattered individual figs and lone emergent Cook pine are believed to be remnant components of this phase of planting. Together these trees are representative of nineteenth century cultural embellishment in the Outer Domain. None of the isolated ageing figs are of particularly large stature or scale however they continue to illustrate the thematic approach adopted by Charles Moore (Director, Botanic Gardens 1848-1896). The extensive use of Moreton Bay figs in combination with tall-growing accents such as native *Araucaria/ Agathis* spp. has defined much of the historic landscape character of the Domain and much of the city's public open spaces. The Cook pine (New Caledonia) was one of a number of native and western Pacific pines (*Araucaria/ Agathis* spp.) used extensively in these schemes. The introduction of these species followed Charles Moore's voyage to the "South Seas" in July 1850 aboard the "H.M.S. Havannah" (Moore, 1851).

Notably, the single Moreton Bay fig located near the olive grove is known as the "Tree of Truth". Once one of Sydney's most famous landmarks, the name was given to this fig for its role as the backdrop to politicians' regular news conferences outside Parliament House (see Historic Background). In 2005 David Mabberley lists this specimen fig as "exceptionally significant" (Mabberley, 2005). It is difficult however to justify this level of significance based on past associational values. In this context the two clustered Moreton Bay figs are considered to have high heritage significance. The "Tree of Truth" and the single Cook pine are considered to have very high significance in terms of individual representative, associational and integrity values.

Lawn DL10a also contains a range of other tree species. Most are relatively recent additions and considered to have broad amenity value. As discussed in SCHEDULE 3, the immature plantations of *Ficus virens* (white fig), *Araucaria cunninghamii* (hoop pine) and *Washingtonia robusta* will in time, make an important thematic contribution. These species will also enhance diversity. At this stage, these immature plantings are not scheduled as significant items.

Physical description	An isolated group of five olive trees (including three European or common olives and two African olives) [Lawn DL10b] located within the north-western corner of Phillip Precinct adjacent to Hospital Road.
Historic background	The existing Olive grove in the north-western corner of Phillip Precinct [Lawn DL10b), consisting of 2 X *Olea europaea* subsp. *cuspidata (Wall. ex G.Don) Cif.* and 3 X *Olea europaea* L. is possibly the Domain's earliest plantation still in existence. Questions remain over the age of this olive plantation – possibly 1830s-1840s (Garcia, M., pers. comm., 2015). In 2014 Miguel Garcia (Daniel Solander Library, RBGS) identified on an 1836 Map of Sydney the location of the south-eastern gate and stile – entry point to the Botanic Gardens (at the east-end of Bent Street) and the approximate location of James Kidd's weatherboard cottage. An article in the Sydney Morning Herald, Thurs 9th September 1897: *"The Domain and Botanic Gardens, Sydney"* written by Edward Stack provided the basis for establishing the approximate location for this cottage and garden. Stack (1897) provides a "*narration of facts gathered from personal recollections of old Sydney residents, from early records, and from [his] own personal knowledge"* (SMH 1987). The article noted: *"On the south-eastern side of this gate was the building used as the 'Female School of Industry' and behind this school about 60 or 70 years ago was a weatherboard cottage, which was built as a residence for the gatekeeper. This cottage was subsequently used as a residence for Mr. Kidd, the superintendent of the Gardens"* (SMH, 9th Sept. 1897, p.4). Miguel Garcia notes that "Kidd began as Assistant Overseer in 1830, Overseer 1833, Assistant Superintendent 1837, Acting Superintendent 1844-1847, and back to Overseer in 1847-1866. As Overseer, Kidd was probably entitled to live in the old Overseer's Residence, 1816-1878." (Garcia, M., pers. comm., 2015). Charles Fraser in his *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 1* identifies eleven (11) different varieties of olive cultivated in the Botanic Gardens introduced 1822-1825 (see list below).

"Olea Europa

European long-leaved Europe [Loddiges] 1824
iron coloured leaf 1824
box leaved [Duguid] 1824
oblique leaved [Loddiges] 1824
oblique twisted leaved (McLeay) 1825
capensis Cape Olive (McArthur) 1823
latifolia broad leaved (McArthur) 1823
angustifolia narrow leaved [Fasifow] 1824
Imdulata? waxed leaved 1824 [Fasifow] 1824
oleafolia olive-leaved (Sth of Europe – McArthur) 1822
laevis smooth-leaved (McLeay) 1822"

'Olea Europa latifolia' and 'Olea Europa angustifolia' are synonyms for *Phillyrea latifolia* and *Phillyrea angustifolia* respectively. 'Olea Europa 'iron coloured leaf'' probably refers to African olive *Olea europaea* subsp. *cuspidata*.

Notably, a number of these earliest introductions came from Alexander McLeay and Edward Macarthur and later his son, William Macarthur (Camden Park). Cuttings of different varieties were presented to the Gardens for propagation during this period through to the 1830s-1840s. On 11th April 1845, a letter to John Reynell from William Macarthur noted that although results were poor at Camden Park in that year, good crops of fruit "of moderate size" and "excellent oil" were being produced at the Botanic Gardens (Mackenzie, A.,. pers. comm. with RBGS, 26th Nov. 2004).

In the Director's Annual Report of 1851, Charles Moore (Director, Botanic Gardens 1848-96) refers to olive plants and the success of the crop in *"the Botanic Garden this year"* [1850]. He also expresses his surprise over the lack of demand for cuttings. In 1856 Moore notes "*the Gardens received Olea Europoea var. [syn. Olea europaea var.] (from Lisbon via Messrs. Beit, Sydney)*"(Moore 1856). In 1857 Moore refers to the *"hardiness, durability, productivity and quality of olive trees and potential to be grown along the rocky shores of Port Jackson and along the Parramatta River"* He again notes: *"surprised by lack of interest and planting"* (Moore 1857).

It is important to recognise the environmental issues associated with the African olive. It has a natural distribution across much of Africa and Asia and is becoming increasingly naturalised over a large area of NSW and the eastern states. African olive has

been declared a noxious weed in NSW (RBGS PlantNET 2015), impacting upon biodiversity and affecting all local government areas within the Sydney metropolitan area.

The African olive is a highly persistent and long-lived tree *"which fundamentally alters ecosystem structure through the formation of a dense mid-canopy in native vegetation communities"* thus reducing opportunities for native recruitment (Cuneo and Leishman 2006; Scientific Committee 2010). Furthermore, African olive *"produces large crops of small black fruits (>25,000 fruits/tree/year) which are readily consumed and dispersed by a range of native and introduced birds"* (ibid 2006; 2010). Dense persistent 'seedling mats' resulting in "long term loss of native species from the soil seedbank" and further reducing opportunities for natural regeneration (ibid 2006; 2010). In 2010 the NSW Scientific Committee, established by the *Threatened Species Conservation Act 1995* made a Final Determination to list the "Invasion of native plant communities by African olive *Olea europaea* L. subsp. *cuspidata* (Wall ex G. Don Cif.), as a key threatening process under Schedule 3 of the Act (gazetted: 1 Oct 2010).

With respect to this grove, only the African olives have been freely flowering and fruiting during the preparation of this study (Jan-Jun 2015). No fruit has been found on any of the other three *Olea europaea* L. The inclusion of two *Olea europaea* L. subsp. *cuspidata* (African olives) within this olive group as cultural heritage items must recognise the long term management implications and required measures to restrict opportunities for seed production, dispersal and recruitment. The Draft WRAP Weed Risk Assessment Implementation Procedure (2009) establishes appropriate assessment and management protocols for incoming collections and existing material, such as these olives, within the collections.

"Tree of Truth"

In 2005 concerns were raised over the health of the "Tree of Truth", the famous Moreton Bay fig named after its role as a backdrop to politicians' regular news conferences (Sydney Morning Herald, 4th July 2005). The tree, like many of the figs in the Domain at this time was suffering the effects of a prolonged drought and cyclical attack by fig psyllids (Bidwell, in press 2005). Moreton Bay figs have a long history of periodic infestation by fig psyllids particularly during periods of stress.

	Of interest, 100 years earlier Joseph Maiden commented on a similar infestation: *"scarcely half a dozen [of the 330 Moreton Bay figs in the Outer Domain] were free during the past year from this unsightly pest."* (Maiden, 1905, p.25).

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). This isolated olive grove (including three European olive varieties and two African olives) is believed to be the earliest planting of any ornamental or fruit trees in the Domain. The planting date may be as early as the 1830s-1840s. The Moreton Bay figs and Cook pine are likely components of planting during the 1860s-1890s.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). It is believed that the olives may have been originally located within the garden of a cottage used as a residence for James Kidd (Assistant Overseer in 1830, Overseer 1833, Assistant Superintendent 1837, Acting Superintendent 1844-1847, Overseer 1847-1866 (Garcia 2015). The figs and Cook pine are remnants of broader plantations under the direction of Charles Moore. Specifically, the "Tree of Truth" retains strong associational and landmark values.
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The evergreen, drought-tolerant olives of Mediterranean, African and Asian origins are representative of an early thematic approach. The figs and Cook pine are remnant components of latter embellishment of the Domain. These ageing trees make a valuable contribution to the Domain's historic landscape character and aesthetic values.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). The small isolated grove of olives stands as a curious anomaly in the Domain focussed on crop yield rather than shade and ornamental embellishment. It is possible that the olive trees were established as an experimental group to test different varieties and cropping capabilities.

Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). The olive trees are representative of a distinctive phase in the Colony's history with a focus on production yield and oil quality rather than ornamental planting for shade, amenity and aesthetics. The Botanic Gardens played a vital role in establishing olives as a potential agricultural crop for the Colony. The Moreton Bay figs and Cook pine are representative of a thematic approach which has shaped the character of much of Sydney's historic parkland and open spaces.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Cuneo P, Leishman MR (2006) African Olive (*Olea europaea* subsp. *cuspidata*) as an environmental weed in eastern Australia: a review. *Cunninghamia* 9, 545-577.

Fraser, C., 1828a, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 2* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney.

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

RBGS PlantNET, *Olea europaea* L. subsp. *cuspidata* (Wall ex G. Don Cif.) <http://plantnet.rbgsyd.nsw.gov.au>[website accessed: 16 June 2015]

Scientific Committee (2010). Final Determination to list the "Invasion of native plant communities by African olive *Olea europaea* L. subsp. *cuspidata* (Wall ex G. Don Cif.)", as a key threatening process under Schedule 3 of the Act. NSW Scientific Committee, Sydney.

Sydney Morning Herald, 9th September 1897, *"The Domain and Botanic Gardens, Sydney"* written by Edward Stack, p.4 <http://trove.nla.gov.au/ndp/del/page/1359452?zoomLevel=3> [17 June 2015]

Sydney Morning Herald, 4th July 2005, *"Domain's famous tree faces day of truth"* written by Jonathan Pearlman <http://www.smh.com.au/news/national/domains-famous-tree-faces-day-of-truth/2005/07/03/1120329331514.html> [17 June 2015]

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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HERITAGE ITEM:	**SINGLE SPECIES AVENUE**
LEVEL OF SIGNIFICANCE:	**HIGH (GROUP)**
LOCATION:	Domain – Art Gallery Road
LAWNS:	Phillip Precinct: Lawns DL1b, DL2a, DL3a, DL4; and Crescent Precinct: Lawns DL19, DL20
HERITAGE ITEM/ TYPE:	Landscape – single species avenue, cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	1919-1921
Integrity:	High
Height/ Spread/ DBH:	Varies (see schedules)
Form/ Health:	Varies (see schedules)
ITEMS SCHEDULED:	***Ficus microcarpa*** LAWN: DL1b IRN: 4112906 [COUNT: 1097] ***Ficus microcarpa*** LAWN: DL1b IRN: 4112905 [COUNT: 1098] ***Ficus microcarpa*** LAWN: DL2a IRN: 4219315 [COUNT: 1095] ***Ficus microcarpa*** LAWN: DL2a IRN: 4112908 [COUNT: 1096] ***Ficus microcarpa*** LAWN: DL2a IRN: 4112909 [COUNT: 1099] ***Ficus microcarpa*** LAWN: DL3a IRN: 4224301 [COUNT: 1081] ***Ficus microcarpa*** LAWN: DL3a IRN: 4223444 [COUNT: 1083] ***Ficus microcarpa*** LAWN: DL3a IRN: 4219319 [COUNT: 1086] ***Ficus microcarpa*** LAWN: DL3a IRN: 4219318 [COUNT: 1088] ***Ficus microcarpa*** LAWN: DL3a IRN: 4219317 [COUNT: 1090] ***Ficus microcarpa*** LAWN: DL3a IRN: 4219320 [COUNT: 1094] ***Ficus microcarpa*** LAWN: DL3a IRN: 756317 [COUNT: 2164] ***Ficus microcarpa*** LAWN: DL4 IRN: 4223445 [COUNT: 1079]

Ficus microcarpa
LAWN: DL4 IRN: 4223447 [COUNT: 1080]
Ficus microcarpa
LAWN: DL4 IRN: 4223446 [COUNT: 2165]
Ficus microcarpa
LAWN: DL19 IRN: 4223449 [COUNT: 1082]
Ficus microcarpa
LAWN: DL19 IRN: 4224111 [COUNT: 1093]
Ficus microcarpa
LAWN: DL20 IRN: 4224112 [COUNT: 1084]
Ficus microcarpa
LAWN: DL20 IRN: 4224115 [COUNT: 1089]
Ficus microcarpa
LAWN: DL20 IRN: 4224116 [COUNT: 1091]
Ficus microcarpa
LAWN: DL20 IRN: 42243000 [COUNT: 1092]

Statement of significance

The avenue of mature Hill's weeping figs *(Ficus microcarpa)* along Art Gallery Road was planted under the direction of J.H. Maiden (Director, Botanic Garden 1896-1924). This fig-tree avenue is believed to be the earliest known example of this species' use as an avenue tree within the greater Sydney metropolitan area (Bidwell, D., pers. comm., 2015). Although somewhat smaller in stature, these Hill's weeping figs pre-date the much taller avenue of figs (of the same species) in Hyde Park (planted c.1930-32).

The Art Gallery Road figs were planted as a single species avenue under the direction of J.H. Maiden commencing 1919 and completed in 1921. The use of this species of fig represents a clear departure from the earlier use of Moreton Bay figs *(Ficus macrophylla)* and Port Jackson figs *(F. rubiginosa)* which had been planted for many years throughout the Domain. The light to mid-green, shiny foliage of Hill's weeping figs was a distinctive characteristic in its selection, contrasting with the darker "sombre hues" of the ubiquitous Moreton Bay figs.

Continued over page

Statement of significance (continued)

This plantation was associated with the carriageway upgrade and replaced an earlier single species avenue plantation of stone pine *(Pinus pinea)* (Maiden, 1920 & 1923; see image c.1890 titled: *"View from the Domain Entrance along Art Gallery Road. Children's gymnasium on left. Robbie Burns Garden and statue on right"* IMG 015909 Daniel Solander Library, RBGS).

The mature figs create a memorable avenue with their broadly-spreading branching pattern ensuring a more or less continuous canopy along Art Gallery Road. The repetition, scale and substantial proportions of many of these figs create a distinctive sense of place in the Domain. The smaller size of some of the figs along the eastern verge may be the result of replacement or infill planting (latter part of the Inter-war period) or shallower soil profiles in this location.

Physical description	Formal avenue of Hill's weeping figs, located along both verges adjoining Art Gallery Road (between St. Mary's Gates and Art Gallery, The Domain).
Historic background	In the Director's Annual Report of 1920, J.H. Maiden describes commencement of new tree planting *"to form an avenue from the St. Mary's Road Gate to the intersection of roads near the Hibiscus plantation. They are to replace the Stone Pine* [*Pinus pinea*] *avenue, of which only a few trees now remain"* (Maiden, 1920). The mature stone pine avenue is clearly evident in the two panoramic images of St. Mary's Road (later Art Gallery Road) taken c.1904 and held in the Herbarium (Garcia, 2015). Although Maiden/ Jones refer to the removal of trees in 1906 *"to improve the vista from the Art Gallery"* (Maiden, 1907, p.26) the schedule of removed species does not include any stone pines in this avenue. Maiden later refers to the selection of the small-leaved Fig (*Ficus nitida*) [syn. *Ficus microcarpa* var. *hillii*] *"on account of its suitability for avenue purposes, being handsome in appearance, umbrageous and possessing pale green shining foliage that will contrast finely with the sombre hues of the surrounding trees. It is proposed to complete the planting during the coming season"* [1920] (Grant/ Maiden, 1920, p.11). The St. Mary's Road (later Art Gallery Road) avenue plantation of Stone Pines was replaced with *Ficus microcarpa* var. *hillii*

	(Hill's weeping fig) under Maiden commencing 1919 and completed in 1921 [see Maiden Reports 1920 and 1923]. An image of an immature (16 year old) specimen *Ficus nitida* [syn. *Ficus microcarpa* var. *hillii*] located in the Outer Domain is included in the 1915 Maiden report (i.e. tree planted in 1899). During the latter part of the Inter-war and Post-war periods Hills' weeping figs were planted widely throughout many of the city's streets and public parks. This process was duplicated across many local government areas. This species however has fallen out of favour in recent decades as a result of issues with its extremely vigorous growth and propensity for tree root damage in confined urban settings. Furthermore, these figs in Art Gallery Road, like those in Hyde Park, are increasingly impacted by soil-borne pathogens. A number of trees are affected and are scheduled for progressive phased removal and replacement. Notably, semi-mature figs proposed for the Hyde Park replacement program, were sourced from the trees in Art Gallery Road. These semi-mature trees are now available from the nursery growers providing an opportunity to retain similar characteristics and genetic integrity within this population.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). This avenue of mature Hill's weeping figs *(Ficus microcarpa)* along Art Gallery Road appears to be the earliest known example of this species' use as an avenue tree within the greater Sydney metropolitan area (Bidwell, D., pers. comm., 2015).
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The Art Gallery Road figs were planted as a single species avenue under the direction of J.H. Maiden commencing 1919 and completed in 1921. This plantation was associated with the carriageway upgrade and replaced an earlier single species avenue plantation of stone pine *(Pinus pinea)*. (Maiden, 1920; 1923).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The Hill's weeping figs create a memorable avenue with their broadly-spreading branching pattern ensuring a more or less continuous

	canopy along Art Gallery Road. The repetition, scale and proportions of many of these figs create a distinctive sense of place.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). These mature figs represent the earliest phase of experimentation with this species as an avenue tree. The use of this species became the model for many of Sydney's streetscapes during the latter part of the Inter-war and Post-war periods. As such these figs reflect a quintessential character defining the visual quality of many of Sydney's streetscapes.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney
SCHEDULE 7
PRECINCT: ART GALLERY (PALM GROUPS)

HERITAGE ITEM:	**TWO PALM GROUPS (ACCENT PLANTING)**
LEVEL OF SIGNIFICANCE:	**VERY HIGH (GROUP)**
LOCATION:	Domain – Art Gallery Road (adjacent to AGNSW)
LAWNS:	Art Gallery Precinct: Lawns DL21, DL22
HERITAGE ITEM/ TYPE:	Landscape – single species palm groups; Cultural planting
Item origin:	Ornamental/ cultivated
Cultivation Date:	1909; *Phoenix* sp. single transplant 1981
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED:	***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL21 IRN: 737825 [COUNT: 735] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL21 IRN: 4224881 [COUNT: 736] ***Phoenix* sp.** LAWN: DL21 IRN: 4087996 [COUNT: 1363] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL22 IRN: 4224881 [COUNT: 737] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL22 IRN: 4224883 [COUNT: 739] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL22 IRN: 4224884 [COUNT: 741]

Statement of significance

These two mature groups of Canary Island date palms *(Phoenix canariensis)* including a single specimen *Phoenix* sp. are an iconic plantation of very high significance. These tall palm accents create a dramatic sense of place acting as visual anchor points in this cultural landscape. Notably, their towering straight trunks, simplicity of form and symmetrical crowns extend a high level of formality to the entry forecourt and façade of the Art Gallery of New South Wales (AGNSW).

Continued over page

Statement of significance (continued)

The five tallest surviving specimens – Canary Island date palms *(Phoenix canariensis)* were established in 1909 during a celebrated period of palm planting in the Domain and Botanic Gardens (Maiden, 1910, p.26). The palms have important associational values with the work of J.H. Maiden (Director, Botanic Garden 1896-1924) and his stated design intent to create *"a more semi-tropical aspect"* (ibid, 1910). Notably, the surviving palms were part of a much broader mixed plantation of palms in these two locations and included a queen palm (*Syagrus romanzoffiana)* and three kentia palms *(Howea forsteriana)* in each of the circular-shaped beds.

The single specimen *Phoenix* sp., located in the southern bed is a more recent addition. The palm was transplanted from Hyde Park Barracks in 1981 (Goodwin, pers. comm., 2015). It is distinctive from the other specimens and its provenance remains unknown. Nevertheless, this palm adds significantly to the group context, formality and symmetry and is considered to be a key element within this plantation. It is considered to be highly significant in this context.

In 2012 the entry forecourt lay-by [Beds D17b, 17c, 17d and 17e] was planted with a row of four mature translocated cabbage palms *(Livistona australis)*. Notably, this layout retains open vistas and the planting is considered to be supplementary to the above heritage palm group. These cabbage palms are not assessed as significant.

Physical description	Two distinctive formal clusters of Canary Island date palms (six palms in total) located within the lawns adjacent to the façade and entry forecourt to the AGNSW.
Historic background	In the Director's Annual Report, J.H. Maiden refers to the *"great emphasis placed on new palm plantations in 1909"* and describes the significance of this year *"in which very large additions were made to the palms already planted in the Domain"*. Maiden states his design intention for *"Sydney to present a more semi-tropical aspect, and the planting of palms will help this."* (Maiden, 1910, p.26). Maiden refers to opening of the "handsome portico" of the Art Gallery on 18th March 1906 (Maiden, 1907). It appears that these two groups of Canary Island Date Palms *(Phoenix canariensis)* were planted in 1909 originally as mixed species palm groups. Maiden refers to *"two circular plots, of 32 feet*

	diameter each, [which] *have been prepared in front of the north and south wings of the National Art Gallery, and planted as under:– 1 Cocos plumosa* [syn. *Syagrus romanzoffiana*]; *3 Phoenix canariensis, and 3 Kentias or Howeas, in each circle."* (ibid, 1910, p.26). Two groups consisting of five *P. canariensis* including three (northern group) and two (southern group) are still extant in these locations. All of the other palms, including one *P. canariensis* have been lost to these two clusters. A single *Phoenix* sp. was transplanted from Hyde Park Barracks in 1981 (Goodwin, pers. comm., 2015) and added to the southern group. This transplanted palm of similar size has significantly enhanced overall symmetry and balance to the two plantations and building forecourt. Canary Island date palms became a very popular choice for plantations during the Inter-war period. Many of these formal plantations (including streets and parks) have significant commemorative values associated with fallen soldiers of WWI. These plantations became known as "avenues of honour" (Read, 2014). Unfortunately, many of these avenues have been decimated by soil-borne fungal pathogens in recent years.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). These two groups of Canary Island date palms *(Phoenix canariensis),* planted in 1909, are integral historic components of this cultural landscape. The surviving palms were part of a broader mixed palm plantation designed to embellish the AGNSW forecourt and to present "*a more semi-tropical aspect"* (Maiden, 1910). A single *Phoenix* sp., sourced from Hyde Park Barracks in 1981, was added (transplanted) to the southern palm group.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). This grouped planting of palms has significance in terms of its historic associations with the work of Maiden and Jones within the Outer Domain. Maiden highlights the *"great emphasis placed on new palm*

	plantations in 1909" and the *"very large additions* [which] *were made to the palms already planted in the Domain".* (Maiden, 1910).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The two iconic palm groups create a dramatic sense of place acting as visual accents and anchor points in this cultural landscape. Their tall straight trunks, simplicity of form and symmetrical crowns extend a high level of formality to the forecourt and façade of the AGNSW.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). These two palm groups are representative of some of the earliest remaining palm plantations in the Domain. This species later became a popular choice for commemorative planting in avenues of honour and public parks during the Inter-war period. This palm species is now an important part of Sydney's cultural landscape history.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Goodwin, S., pers. comm., 2015

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden.

Read, S., 2014 “Avenues of Honour and Memorial Avenues Listings”, unpublished notes compiling a detailed list of Australian Avenues of Honour.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney
SCHEDULE 8
PRECINCT: ART GALLERY (SURROUNDS)

HERITAGE ITEM:	**MISCELLANEOUS INDIVIDUAL & GROUP PLANTING**
LEVEL OF SIGNIFICANCE:	**HIGH – VERY HIGH (GROUP & INDIVIDUAL FIG)**
LOCATION:	Domain – Art Gallery (surrounds) including: Southern sloping lawn (adjacent to AGNSW); and Upper slope adj. to land-bridge (Art Gallery Road)
LAWNS:	Crescent Precinct: Lawns DL23, DL27
HERITAGE ITEM/ TYPE:	Landscape - single specimen fig, cultural planting; Miscellaneous figs and specimen palms
Item origin:	Ornamental/ cultivated (figs possibly native remnant)
Cultivation Date(s):	See following details
Integrity:	High
Height/ Spread/ DBH:	Varies (see schedules)
Form/ Health:	Varies (see schedules)
ITEMS SCHEDULED:	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL23 IRN: 4224900 [COUNT: 1221] ***Phoenix canariensis*** Hort. ex Chabaud LAWN: DL27 IRN: 4223453 [COUNT: 742] ***Chamaerops humilis*** LAWN: DL27 IRN: 4219231 [COUNT: 2436] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL27 IRN: 4224761 [COUNT: 1118] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL27 IRN: 4224760 [COUNT: 1119]

Statement of significance

The Moreton Bay fig *(Ficus macrophylla* subsp. *macrophylla)* located on the sloping Lawn DL23 adjacent to the AGNSW is a single isolated specimen of massive scale and proportions (30m HT, 2.6m dbh, 40m canopy diam.). It was likely planted during the 1850s-1870s and is representative of the early plantations established in the Domain during Charles Moore's directorship at the Botanic Gardens (1848-1896). An aerial photo image taken in 1943 shows that this fig had attained a 30 metres canopy spread (SIX Maps 2015).

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Statement of significance (continued)

This fig is a particularly outstanding specimen providing significant visual screening to the south-eastern facade and service area of the AGNSW. This specimen fig is considered to have very high heritage significance.

In the Director's Annual Report, J.H. Maiden refers to the removal of healthy trees near the National Art Gallery "to show that building to a better advantage, and to open up some vistas in connection therewith" (Jones/ Maiden, 1903, p.28). Nevertheless, the size of this tree together with Maiden's stated concerns over lack of diversity in the Outer Domain plantations and preference for other species at this time, including more Eucalypts (Maiden, 1902), suggests that this specimen pre-dates construction of the AGNSW. Notably, one other mature Moreton Bay fig *(Ficus macrophylla* subsp*. macrophylla),* located within a small courtyard of the AGNSW (northern facade), is not included in this assessment.

The mixed group of mature palms and figs located on Lawn DL27 include a Canary Island date palm *(Phoenix canariensis)*, European fan palm *(Chamaerops humilis)* and two Port Jackson figs *(Ficus rubiginosa* f. *rubiginosa).* It is believed that the figs were possibly planted in the mid- to late nineteenth century or alternatively may be remnant components of the original vegetation associated with rock outcrops on this slope (subsequently backfilled and turfed). These trees are representative of *F. rubiginosa* f. *rubiginosa* rather than f. *glabrescens* and are likely to have a local origin) (Note: f. *glabrescens* has a natural distribution north of the NSW-Qld border). Although this taxa is somewhat common throughout the Domain and includes many self-sown specimens associated with rock outcrops and scarps (i.e. lithophyte), this age cohort is less common. There are indeed some memorable examples of this species throughout the Botanic Garden and the Domain. The fig on the upper lawn slope is an interesting specimen displaying a distinctive character and form. It has an unusual pendulous branching pattern throughout the entire crown. The fig on the lower slope, largely screened by recent plantations of *Angophora/ Eucalyptus* spp., is leaning with an open, asymmetrical crown. It is another specimen of similar age. Both trees are considered to have a high level of significance.

On first appearance, the size and scale of the single Canary Island date palm suggests it may date from the Inter-war period however a specific reference by Maiden in 1910 confirms a planting date of 1909 (see historical background).

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Statement of significance (continued)

This is the year that Maiden significantly increased the numbers of palms in the Outer Domain under a stated objective *"to present a more semi-tropical aspect"* for Sydney (Maiden/ Jones, 1910, p.26). This has been a lasting legacy for over a century defining much of Sydney's landscape character and charm. Other elements from this period may have vanished from this part of the Domain.

The transplanted European fan palm is a fine multi-stemmed specimen but unfortunately is largely obscured from public view by surrounding mass planted beds and a low-branching immature Moreton Bay fig on the upper verge. Both palm species are typical of earlier plantations established under J.H. Maiden. The two palms are therefore assessed as having high significance.

Together the figs and palms form a rather eclectic and disparate group within the broader collection of the Domain. It is likely that their location adjacent to the land-bridge (Cahill Expressway overpass) and other major infrastructure has been a major factor in their isolation and alienation since the early 1960s. Planting of additional Moreton Bay figs adjacent to the land-bridge (overpass) will in time, have a significant positive impact on the overall visual and aesthetic character of this landscape. Importantly, these additions will enhance and consolidate this historic group and further enrich its cultural context.

Physical description	This listing is comprised of a single Moreton Bay fig on Lawn DL23 adjacent to the AGNSW (south-eastern façade) and a small mixed group of Port Jackson figs and palms on the sloping Lawn DL27 (northern side of land-bridge over Cahill Expressway).
Historic background	The Moreton Bay fig was likely planted in the mid- to late nineteenth century before construction of the AGNSW (old wing and façade: 1896-1909). This massive specimen fig is representative of the early plantations of shade trees established in the Domain during Charles Moore's directorship at the Botanic Gardens (1848-1896). The mixed group of Port Jackson figs and Canary Island date palm located north of the land-bridge appear to be a remnant group dating from the late 19th and early 20th century. The European fan palm *(Chamaerops humilis)* was transplanted in 1997 from a location in the immediate vicinity (Bidwell, D., pers. comm. 2015). The original planting date for this palm is not known however it is

	representative of the early 20th century mixed palm palette under the directorship of J.H. Maiden. *C. humilis* was first noted as introduced to the Gardens in 1827 (Fraser 1828b). Notably, in the 1910 Director's Annual Report, Maiden refers to the planting of a *"single specimen* [Canary Island Date Palm] *Phoenix canariensis planted* [in 1909] *nearly opposite the Director's residence overlooking Woolloomooloo Bay; and 4 of the same species individually planted on Macquarie Promontory overlooking Garden Island"* (Jones/ Maiden, 1910, p.26). It is important to recognise the context for planting of this specimen palm in this location (Morris, C., pers. comm., 2015). In this same report, Maiden states his intention of increasing the number of palms to be planted in the Domain: *"Plantations – great emphasis placed on new palm plantations in 1909";* Many new palm planting locations are scheduled here before concluding: *"The year 1909, therefore, will be known as the year in which very large additions were made to the palms already planted in the Domain. I want Sydney to present a more semi-tropical aspect, and the planting of palms will help this."* (Maiden/ Jones, 1910, p.26). This single specimen is therefore considered to have high significance in this context.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). The specimen Moreton Bay fig was likely planted before construction of the AGNSW (mid- to late 19th century). The Port Jackson figs and mixed palms are remnant components of early planting programs in the Domain. The European fan palm is a transplanted specimen.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The Moreton Bay fig and Port Jackson figs are representative of the thematic approach taken by Charles Moore (Director, Botanic Gardens 1848-96). The palm species have associations with the work of J.H. Maiden (Director, Botanic Gardens 1896-1924).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The Moreton Bay fig is significant in terms of its dramatic scale and

	proportions in this context. It provides an important functional role in screening the south-eastern facade of the AGNSW. The mixed figs and palm group near the land-bridge make a moderate contribution to the visual character of this location. Recent plantations of figs will further enhance aesthetic qualities.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). These trees and palms are representative of key planting phases in the Domain spanning a period from the mid- to late nineteenth and early twentieth centuries. They have come to symbolise Sydney's cultural landscape tradition.
Integrity	Moderate – High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Australian Tropical Rainforest Plants, CSIRO publication, website accessed 2015

Bidwell, D., pers. comm., 2015

Fraser, C., 1828b, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 2* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

Morris, C., pers. comm., 2015

Read, S., 2014 "Avenues of Honour and Memorial Avenues Listings", unpublished notes compiling a detailed list of Australian Avenues of Honour.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney

SCHEDULE 9

PRECINCT: CRESCENT (UPPER LAWNS SOUTH OF ART GALLERY)

HERITAGE ITEM:	**MISCELLANEOUS INDIVIDUAL & GROUP PLANTING**
LEVEL OF SIGNIFICANCE:	**HIGH (GROUP)**
LOCATION:	Domain – lawn area south of AGNSW
LAWNS:	Crescent Precinct: DL19, DL20
HERITAGE ITEM/ TYPE:	Miscellaneous figs, brush box and Cook pine; Cultural planting;
Item origin:	Ornamental/ cultivated
Cultivation Date(s):	See following details
Integrity:	High
Height/ Spread/ DBH:	Varies (see schedules)
Form/ Health:	Varies (see schedules)
ITEMS SCHEDULED:	***Araucaria columnaris*** (G.Forst.) Hook. LAWN: DL19 IRN: 4056366 [COUNT: 969] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224898 [COUNT: 1206] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224899 [COUNT: 1207] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4224891 [COUNT: 1197] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL19 IRN: 4012178 [COUNT: 1311] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL19 IRN: 4224828 [COUNT: 1110] ***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL20 IRN: 4224562 [COUNT: 1047]

Statement of significance

The dominant Moreton Bay figs *(Ficus macrophylla)* and single planting of a Cook pine *(Araucaria columnaris)* and Port Jackson fig *(Ficus rubiginosa)* located on Lawn DL19 are likely to date from the 1860s-1890s period. These loosely clustered and scattered individual trees are believed to be representative of early cultural embellishment and response to a growing need for shade and amenity trees in the Outer Domain.

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Statement of significance (continued)

These trees would have been established under Charles Moore's directorship at the Botanic Gardens (1848-1896). The extensive use of Moreton Bay figs has largely defined the landscape character and aesthetic qualities of the Domain and much of the city's public open spaces. Together these figs and the single Cook pine are considered to have high heritage significance in this context. This level of significance relates specifically to the group as an entity rather than any individual specimen of particularly outstanding representative or integrity value. Nevertheless, the two Moreton Bay figs on the upper western slope (adjacent to Art Gallery Road) have achieved considerable proportions and scale. The single specimen brush box *(Lophostemon confertus)* located on upper Lawn DL20 is also considered to have high heritage significance likely dating from the early twentieth century during Maiden's directorship at the Botanic Gardens (1896-1924). This specimen has an unusually large basal area for this species, possibly reflecting its age and shallow soil profile in this location.

These two lawns (DL19 & DL20) also contain many other individual, grouped and avenue trees which have been added in recent decades. These trees include a broad range of species including clusters of native smooth-barked apple *(Angophora costata),* swamp mahogany *(Eucalyptus robusta),* broad-leaved paperbark *(Melaleuca quinquenervia)* and mixed fig plantations of *Ficus rubiginosa, F. watkinsiana and F. obliqua*. These relatively recent additions are considered to have broad amenity value and are generally supportive (i.e. fig plantations) to neutral (i.e. generic native plantations) in this context.

Physical description	A group of loosely clustered figs (dominated by Moreton Bay fig) and single Cook pine on lower and upper slope of Lawn DL19 and a single specimen brush box on upper Lawn DL20. These trees occur on open lawns within and adjoining relatively recent plantations of generic native trees.
Historic background	Most of these trees would have been established under Charles Moore's directorship at the Botanic Gardens (1848-1896) with the exception of the brush box which may be an early twentieth century planting. The planting palette is typical of Charles Moore (i.e. dominant Moreton Bay figs/ mixed Port Jackson figs and *Araucaria* spp. accents). The Cook pine (New Caledonia) was one of a number of native and western Pacific pines (*Araucaria/ Agathis* spp.) used extensively in these schemes. The introduction of these species followed Charles Moore's

voyage to the "South Seas" in July 1850 aboard the "H.M.S. Havannah" (Moore, 1851). Maiden writes in 1906: *"In 1850 Mr. Moore went in a warship to the South Seas Islands collecting plants for Sydney – going to the New Hebrides, Queen Charlotte Group, the Solomons, and New Caledonia. In the early days, economic plants for the Islands were almost all introduced through the intermediary of the Sydney Botanic Gardens, and rare, indeed, were the occasions that a British warship bound for the Islands went away without a wardian case or two from Sydney.* Maiden continues with an interest anecdote in relation to these collections: "*I believe it is thoroughly well authenticated that the despatch of a case of plants from the Sydney Botanic Gardens in 1853 expedited the annexation of New Caledonia by the French"* (Maiden, 1906, p.4).

In the 1851 Annual Report, Moore notes a number of native and South Pacific conifers: "From 1850 Araucaria excelsa [syn. A. heterophylla], A. Cunninghamii *[syn. A. cunninghamii*], A. Cookii, [syn. *A. columnaris*], A. Bidwellii [syn. *Araucaria bidwillii*] being sent to other Botanic Gardens and private collectors in England, Hobart Town, Adelaide, Tahiti and Mauritius (Moore, 1851). In the following year and subsequent years many other new native rainforest and Pacific Island species were added to the contributions sent from the Botanic Gardens, notably [extract]: Araucaria Cookii, [syn. *A. columnaris*], Araucaria Bidwellii [syn. *A. bidwillii*], A. Cunninghamii *[syn. A. cunninghamii*], A. excelsa [syn. *A. heterophylla*], Dammara Moorii [syn. *Agathis moorei*], D. obtusa, Corypha Australis [syn. *Livistona australis*], Livistona inermis, Ficus macrophylla, Inga species, Richmond River, Acmena pendula, Eugenia uniflora [NB. Brazil Cherry, Pitanga], Cedrela Australis [syn. *Toona ciliata*], Lophostemon Australis…" (Moore, 1852).

Mills notes in *Hortus Camdenensis* that 'Araucaria Cookii' "is probably identical to *Araucaria columnaris* (Forst.f.) Hook., which see, listed under the name *Araucaria Cookii* in the 1857 catalogue. The *Araucaria species* unidentified New Caledonia was probably replaced by *Araucaria Cookii* in the 1857 edition when Macarthur confirmed its identity." (Mills, 2010).

This broader thematic approach using both native rainforest and Pacific Island species has come to define much of the visual landscape character of the Domain and the city's public parks dating from this period.

By the beginning of the twentieth century, Moreton Bay figs *(Ficus macrophylla)* had proved to be highly adaptable and resilient under the environmental conditions of the Domain. This species had been largely free of insect pests and disease but in a reference to fig psyllid *(Mycopsylla fici)* J.H. Maiden stated that *"Of 330 trees of Ficus macrophylla in the Outer Domain, scarcely half a dozen were free during the past year from this unsightly pest."* (Maiden, 1905, p.25). This statement highlights the extraordinary contribution these trees were making to the visual and aesthetic character of the Domain. By 1905 however many of these figs were shading out other tree species and preventing establishment of lawns. Their very success generated considerable interest in diversifying the tree collection within the Outer Domain. Some figs were removed while many were heavily pruned to allow greater sunlight and enjoyment of the open spaces.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). These trees are remnant components of early shade and amenity planting within the Outer Domain, likely planted in the 1860s-1890s period. The group is comprised of loosely clustered and scattered individual trees representative of an early thematic planting approach.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The planting palette is dominated by Moreton Bay figs in association with Port Jackson fig and Cook pine accents. These species represent a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96). The brush box has associations with Joseph Maiden (Director, Botanic Gardens 1896-1924).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). These ageing trees continue to reinforce a special landscape character and aesthetic. The massive scale, dramatic character and repetition of Moreton Bay figs along with associate planting define a special 'sense of place' for the Domain. New plantations of mixed figs in this area will further consolidate and enhance aesthetic qualities.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

	n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). This group, dominated by figs including a single *Araucaria* accent and brush box are representative of mid- to late 19th and early 20th century planting. These trees have come to symbolise Sydney's cultural landscape tradition. The thematic approach became the model for many of the city's public parks and open spaces.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney

SCHEDULE 10

PRECINCT: CRESCENT (SOUTHERN LAWNS & DOMAIN LODGE)

HERITAGE ITEM:	**MISCELLANEOUS INDIVIDUAL & GROUP PLANTING**
LEVEL OF SIGNIFICANCE:	**HIGH-EXCEPTIONAL (GROUP & INDIVIDUAL ITEMS)** **MODERATE (THREE ITEMS)**
LOCATION:	Domain – lawn area (adj. to St. Mary's Road); and Domain Lodge (Art Gallery Road)
BEDS/ LAWNS:	Crescent Precinct: Bed D14; Lawns DL16a, DL16b, DL16e
HERITAGE ITEM/ TYPE:	Dominant figs; mixed natives & exotics; Cultural planting;
Item origin:	Ornamental/ cultivated
Cultivation Date(s):	See following details
Integrity:	Varies: Exceptional-High-Moderate
Height/ Spread/ DBH:	Varies (see schedules)
Form/ Health:	Varies (see schedules)
ITEMS SCHEDULED:	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** BED: D14 IRN: 4224861 [COUNT: 2163] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 4224876 [COUNT: 1193] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 4224887 [COUNT: 1188] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16a IRN: 756321 [COUNT: 2319] ***Lophostemon confertus*** (R.Br.) P.G.Wilson& J.T.Waterh. LAWN: DL16a IRN: 4224516 [COUNT: 1045] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL16b IRN: 4224889 [COUNT: 1002] ***Phillyrea latifolia*** L. LAWN: DL16b IRN: 4224424 [COUNT: 1004] ***Quercus suber*** LAWN: DL16b IRN: 4072302 [COUNT: 465] ***Zelkova serrata*** (Makino) Thunb. LAWN: DL16b IRN: 4069817 [COUNT: 370] ***Populus x canadensis*** Moench LAWN: DL16e IRN: 4069870 [COUNT: 170]

Statement of significance

The southern lawns of Crescent precinct, adjacent to Domain depot (formerly Domain Lodge, built in 1835) retain significant historic contextual values. As in other parts of the Domain, the mature plantations of *Ficus macrophylla* subsp. *macrophylla* (Moreton Bay figs) provide a high level of continuity, unity and integrity in this cultural landscape. This part of Crescent precinct retains five Moreton Bay figs of varying dimensions and scale [located on lawns DL16a, DL16b and D14]. These figs are likely to be amongst some of the earliest plantings in the Outer Domain. Notably, two of these figs, located near the Domain Lodge and corner of St. Mary's Road and Art Gallery Road may date from the 1840s period following construction of Domain Lodge. The three other figs are likely to date from the mid- to late 19th century, established under Charles Moore's directorship at the Botanic Gardens (1848-1896). The earliest planting of this species in the Domain however may be associated with James Anderson, Superintendent 1838-42 or James Kidd, Acting Superintendent 1844-47 or J.C. Bidwill, Director of the Botanic Gardens 1847.

Together these figs are representative of early cultural embellishment and a response to a growing need for shade and amenity trees in the Outer Domain. The extensive use of Moreton Bay figs has largely defined the landscape character and aesthetic qualities of this public space and much of the city's public parklands. These scattered individual figs include one particularly large specimen located on the lawn immediately east of the Domain Lodge (now Domain depot). This fine specimen has a broadly spreading canopy and low-branching pattern (20 metres height; 38 metres canopy spread; 2.60 metres dbh). An aerial image taken in 1943 shows that this fig has maintained much the same canopy spread over the past 70+ years (SIX maps 2015). This Moreton Bay fig is considered to have very high significance as an individual specimen. Overall, this group of three figs [DL16a] are assessed as having high significance as a group.

The garden adjacent to Domain Lodge and St. Mary's Gates and adjoining lawn near the corner of St. Mary's Road and Art Gallery Road contain some highly significant specimen trees. This small group of trees includes two *Ficus macrophylla* subsp. *macrophylla* (Moreton Bay figs) [D14 & DL16b], a multi-stemmed *Phillyrea latifolia* (green olive tree or broad-leaved mock privet) [DL16b] and a single *Quercus suber* (cork oak) [DL16b]. It is believed that these four trees may have been planted during the 1840s-1850s period. An aerial photo image taken in 1943 provides no clear indication of the presence of the two smaller trees. Nevertheless, the group is assessed as having exceptional significance in this context.

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Statement of significance (continued)

Other trees in this group [DL16b] include a *Zelkova serrata* (Japanese elm), possibly dating from the Inter-war or Post-war period and a *Melaleuca quinquenervia* (broad-leaved paperbark) a relatively recent addition. The *Z. serrata* makes an important contribution to landscape character in this visually prominent location. This tree is considered to have a moderate level of significance in this context however it is directly crowding the canopy and impacting the health and longevity of the *Phillyrea latifolia*. The *Melaleuca quinquenervia* is assessed as neutral and potentially intrusive, particularly as it matures into a much larger tree and further impacts integrity values of the *P. latifolia*. Lawns DL16a and DL16e include a brush box *(Lophostemon confertus)* and poplar *(Populus* x *canadensis)* respectively. These two trees are possibly Inter-war or Post-war period planting and are considered to have a moderate level of significance in terms of the heritage criteria.

The recent additions of *Araucaria cunninghamii, Agathis moorei* and *A. microstachya* will, in time, make an important thematic contribution to this historically significant landscape. These species will also enhance diversity. At this stage, these immature plantings are not scheduled as significant items.

Physical description	A group of scattered Moreton Bay figs dominate this southern part of Crescent precinct [Lawns DL16a and 16b] adjacent to Domain Lodge (Domain Depot). These mature figs occur on open lawns and in association with other Inter-war and Post-war period planting and more recent additions including *Agathis* and *Araucaria* spp. Notably, the garden bed [D14] within the Domain Lodge (depot) fence-line includes an early specimen Moreton Bay fig. Similarly, the adjacent lawn [D16b] retains other significant early plantings including a Moreton Bay fig, green olive tree and cork oak.
Historic background	The Domain Lodge was constructed in 1835 (State Heritage Register listing, 2012). The gateposts for St. Mary's Gate were a later addition (c.1867). The Domain Lodge's palisade-walled garden was noted for its significant plant specimens including a large *Euphorbia* sp. (African cactus tree) (ibid, 2012). This tree was removed over 10 years ago during renovations to the Domain Lodge (depot). This garden includes a single specimen *Ficus macrophylla*

subsp. *macrophylla* (Moreton Bay fig), located on the southern side of the Lodge and St. Mary's Gate [Bed D14]. Although considered to be of a substantial age, this tree is somewhat open and stunted in terms in its form and overall scale possibly as a result of poor soil conditions and shallow sandstone substrate in this location. This tree is visually part of the broader group of trees of similar age structure.

Another fine specimen Moreton Bay fig, displaying the same characteristic form and scale, is located within a small cluster of trees on the corner of Art Gallery Road and St. Mary's Road [Lawn DL16b]. Apart from three younger trees including a mature *Zelkova serrata* (likely Inter-war or Post-war period), *Melaleuca quinquenervia* (late-20th century) and *Araucaria cunninghamii* (planted 2005), the three significant trees in this group are amongst the earliest cultivated in the Gardens:

- *Ficus macrophylla* (Moreton Bay fig) [Fraser, 1823];
- *Phillyrea latifolia* (broad-leaved mock privet) [MacArthur, 1823]; and
- *Quercus suber* (cork oak) [MacArthur, 1824].

These tree species were first cultivated in the Gardens 1823-24 (refer to Charles Fraser's "*Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 1"*). The densely canopied native figs and drought tolerant, long-lived exotic species sourced from the Mediterranean basin (see items above) remained popular throughout Moore and Maiden's directorships at the Gardens.

The Masterplan prepared by MALA (2000) also identified three olives (*Olea* sp.) in this group [DL16b] with potential heritage significance. Two olives were removed in January 2014. At least one of these olives was self-sown growing amid the buttresses of one of the Moreton Bay figs (IRN: 4224889). The age of individual trees at the time of removal is unknown.

The specimen *Phillyrea latifolia* [syn. *Olea latifolia* described by Fraser 1828a] is of particular interest. The size of this multi-stemmed specimen in this location (15m height, 15m canopy spread and 5 X stems approx. 0.22-0.29-0.30-0.38-0.50 dbh) suggests it is a very early planting. This species is somewhat rare in cultivation within the greater Sydney metropolitan area however the Botanic Garden retains a few older specimens in

the collection. Notably, an exceptionally large multi-stemmed specimen (5 X stems approx. 0.45-0.46-0.50-0.60-0.83 dbh) is located near the seawall in the Botanic Garden [Lawn L34]. *Hortus Camdenensis* notes this tree is "listed as *Phillyrea latifolia* only in the 1857 catalogue [T.749/1857] but *Olea latifolia* was presented to the Sydney Botanic Gardens by Edward Macarthur in 1824 [RBGS AB]. Charles Fraser notes the date as 1823 (Fraser, 1828). It seems likely that it was grown at Camden under the name *Phillyrea latifolia* earlier than 1857, an hypothesis supported by an 1836 Loddiges' catalogue held at Camden Park in which *Phillyrea latifolia* is marked with a 'c', denoting grown at Camden" (Mills, 2010).

P. latifolia is a multi-stemmed tall shrub or small tree, commonly associated with holm oak *(Quercus ilex)* and strawberry tree *(Arbutus unedo)* in the holm oak forests of the Mediterranean basin, and as such continues an early thematic approach in the Botanic Gardens and the Domain. Strawberry tree *(Arbutus unedo)* was first cultivated in the Botanic Garden, Sydney in 1823 and holm oak *(Quercus ilex)* shortly after in 1824 (Fraser, 1828).

The old specimen *Quercus suber* (cork oak) in this group is another component of these forest mosaics. It was first cultivated in the Gardens in 1824. Here, this leaning and gnarled tree makes an important contribution to the visual and aesthetic character of this tree group and prominent entry point to the Domain.

It remains unclear as to whether these four older trees (i.e. two Moreton Bay figs, mock privet and cork oak in Bed D14 and Lawn DL16b) were planted in the 1840s (following construction of Domain Lodge) or later, perhaps in association with the demolition of Governor Macquarie's wall (c.1866) and construction of St. Mary's Gates (c.1867). If they were planted in the 1840s then they would be amongst the oldest planted trees in the Domain.

Alternatively, J.H. Maiden refers to the planting of trees *"caused by Mr. Bowie Wilson", Minister for Lands 'about 1866' and substantial civil works in the vicinity of the Colonial Architect's Office (demolished to make way for the Registrar General's Office). These works included demolition of the Macquarie wall (located close to the Domain Lodge) and addition of that portion*

	of land adjoining St. Mary's Road to the Outer Domain" (Maiden, 1924, p.256 ref. letter of Hon. John Macintosh). These works included re-alignment of the Domain boundary including widening St. Mary's Road and "re-joining the old boundary at St. Mary's lodge" [see 1867 SMH article – Maiden, 1924, pp.259-261]. Further research is required to determine the age of this early plantation. Nevertheless, it is considered that all four trees have exceptional significance in this context. This particular group of trees are representative of a distinctive thematic approach mixing drought-tolerant native figs and Mediterranean evergreen species. This is the only remaining example of this approach and age cohort in the Domain.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). These trees are remnant components of early shade and amenity planting within the Outer Domain. The Domain Lodge group may date from the 1840s (following construction of Domain Lodge). Other significant trees in this location were likely planted in the 1860s-1890s. The group is comprised of loosely clustered and scattered individual native and European (Mediterranean) evergreen trees representative of an early thematic planting approach.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The small group of trees located near the Domain Lodge may be associated with James Anderson, Superintendent 1838-42 or James Kidd, Acting Superintendent 1844-47 or J.C. Bidwill, Director of the Botanic Gardens 1847. The broader historic group, including the dominant figs, represent a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). These ageing trees continue to reinforce a special landscape character and aesthetic. The massive scale, dramatic character and repetition of Moreton Bay figs along with associate planting define a special 'sense of place' for the Domain. Recent accent planting including *Agathis* and *Araucaria* spp. in this area will, in time, further consolidate and enhance aesthetic qualities.

Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). The small group of significant trees located near the Domain Lodge (figs, mock privet and cork oak) represent a distinctive thematic approach and age cohort (early to mid- 19th century) which is becoming increasingly rare in the Domain.
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). The four scheduled older trees located near Domain Lodge represent the earliest remaining examples of this native fig/ Mediterranean evergreen thematic approach in the Domain. In terms of the broader fig group, these trees are representative of a thematic approach which has come to symbolise Sydney's cultural landscape tradition.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Fraser, C., 1828a, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 2* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney
SCHEDULE 11
PRECINCT: WOOLLOOMOOLOO (LAWN DL28)

HERITAGE ITEM:	**MIXED FIG PLANTING & OLD GROWTH REMNANT NATIVE TREES**
LEVEL OF SIGNIFICANCE:	**VERY HIGH-EXCEPTIONAL (MIXED GROUP)** **EXCEPTIONAL (SCHEDULED 'WILD' REMNANTS)** **HIGH-VERY HIGH (SCHEDULED PLANTED ITEMS)**
LOCATION:	Domain – Steep 'bowl' and sloping lawns within Mrs. Macquarie's Road loop (opposite sub-station)
LAWN:	Woolloomooloo Precinct: DL28
HERITAGE ITEM/ TYPE:	Landscape – informal grove; old growth specimens
Item origin:	Ornamental/ cultivated; wild (remnant natives)
Cultivation Date:	c.1850s to 1890s
Wild:	possibly <1788 (wild – two old growth specimens)
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED:	***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224703 [COUNT: 1232] ***Ficus virens*** Aiton **var. *virens*** LAWN: DL28 IRN: 4112878 [COUNT: 936] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL28 IRN: 4224724 [COUNT: 1120] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL28 IRN: 4224725 [COUNT: 1121] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224704 [COUNT: 1230] ***Ficus macrophylla*** Pers. ex Desf. **subsp. *macrophylla*** LAWN: DL28 IRN: 4224705 [COUNT: 1231] ***Eucalyptus pilularis*** Sm. LAWN: DL28 IRN: 4094071 [COUNT: 1318] ***Eucalyptus pilularis*** Sm. LAWN: DL28 IRN: 4094072 [COUNT: 1319]

Statement of significance

Lawn DL28 retains two major clusters – a cultural plantation of figs (southern group) and two 'wild' remnant old growth *Eucalyptus pilularis* (blackbutt) (northern group). These groups occur in a narrow linear corridor of open space within the loop road (Mrs. Macquarie's Road). The natural contours have been highly modified since the time of Charles Moore who began an extensive program of alterations to this landscape in the late 1850s-1870s. The broken scarps, rocky outcrops and scree slopes, typical of Hawkesbury sandstone landscapes were levelled and re-contoured to achieve a more 'picturesque' landscape aesthetic. Joseph Maiden refers to these major works along the eastern slope of the Outer Domain between Palmer Street and Woolloomooloo Bay (and extending to the Ladies baths) including old quarry sites which were being re-levelled, contoured, turfed and planted (Maiden, 1924, p.253).

Southern group (cultivated mixed figs) – high to very high significance
The southern group of cultivated mixed figs are located within a deeply sculpted 'bowl' or amphitheatre and along the adjacent gentle rise opposite the substation. This group, including three *Ficus macrophylla* (Moreton Bay fig), two *F. rubiginosa* (Port Jackson fig) and a single *F. virens* var. *virens* (white fig) creates an outstanding cultural landscape. The figs, particularly two specimens, a massive Moreton Bay fig and an adjacent white fig, totally dominate the visual character of this location and together create a memorable "sense of place". The other fig specimens, set amid rolling lawns further reinforce the visual and aesthetic qualities of this place. It is likely that all these figs were planted during the same period, possibly 1860s-1870s. The group is assessed as having very high heritage significance in this context.

An aerial photo image taken in 1943 shows the largest specimen Moreton Bay fig (IRN: 4224703) with a 30 metres canopy spread (35 metres in 2015) (SIX maps 2015). The adjacent white fig (IRN: 4112878) had a canopy diameter of 17 metres in 1943 (25 metres in 2015) (ibid. 2015). As individual specimens, these trees are considered to have very high heritage significance. Although the two other Moreton Bay figs in this group display evidence of decline since the 1943 image with relatively open, asymmetric crowns, branch loss and heavy pruning they are both considered to have high heritage significance. The canopy diameters of the two Port Jackson figs (IRN: 4224724 and IRN: 4224725) have increased from 11 and 16 and metres (1943) to 17 and 23metres (2015) respectively. These Port Jackson figs are also considered to have high individual heritage significance.

Continued over page

Statement of significance (continued)

Importantly, the figs encapsulate the thematic approach pursued by Charles Moore (Director, Botanic Gardens 1848-1896). The figs are representative of early cultural embellishment and a response to a growing need for shade and amenity trees in the Outer Domain. The historic plantations of figs (dominated by Moreton Bay figs) provide a high level of continuity, unity and integrity throughout this cultural landscape. This planting palette of Charles Moore was repeated for many of the city's older public parks and open spaces during his long tenure as Director of the Botanic Gardens.

Northern group (old growth remnants) – exceptional significance
The cultivated plantations in the Domain gradually replaced a 'wild' natural landscape – a mosaic of shrubby woodland and forest communities. In spite of all the changes which have occurred in the Domain since Macquarie's time, this area still conserves a small but remarkable remnant population of old growth and regrowth native trees, some of which likely pre-date European settlement in 1788. In addition, other native plant species have been planted from local provenance sourced material further enhancing resilience in this system.

Notably, two remnant old growth specimens – *Eucalyptus pilularis* (blackbutt) have persisted within Lawn DL28. These two native trees form the northern group in this schedule. They are located together on sloping ground to the north of a low rocky outcrop adjacent to the lower loop road (Mrs. Macquarie's Road). Although not particularly large examples for this taxa, both trees are nevertheless believed to pre-date European settlement. Doug Benson suggests that old growth remnant native Eucalypts of this size (dbh ≥1.0 metres) and in this location are likely to be in the order of 200+ years old (Benson, D., pers. comm., Jan., 2015). These two trees (IRN: 4094071 and IRN: 4094072) have a measured 1.5 metres and 0.95 metres dbh respectively. Both trees appear to have changed little in terms of their overall canopy size (16 metres and 12 metres respectively) since 1943 (72 years). The larger specimen has an extensive network of habitat hollows in the lower branches. One of the nesting hollows is currently occupied by a pair of white cockatoos.

These two remnant old growth Eucalypts have exceptional heritage values. They symbolise the resilience and diversity of the former 'wild' natural landscape which existed at the time of European settlement. They continue to play a vital role in providing habitat and connectivity, conserving genetic diversity and offering a seedbank for regeneration. In accordance with the definitions contained in this report, these two trees are assessed as having exceptional heritage significance at the individual and group levels.

Physical description	Lawn DL28 retains two major clusters – a cultural plantation of figs (southern group) and two 'wild' remnant old growth specimens – *Eucalyptus pilularis* (blackbutt) (northern group). These groups occur in a narrow linear corridor of open space within the loop road (Mrs. Macquarie's Road).
Historic background	In a review of the landscape character of the Outer Domain during the latter part of Fraser's period as Director, Botanic Gardens (1828-31), Maiden writes that *"For many years the eastern part of the Domain was looked upon as a rather wild sort of a place, bush, in fact (as indeed it was), and quite in the country."* (Maiden, 1924, p.248). By 1850 the Outer Domain was gaining immensely in popularity. In 1852 the Domain had *"four miles of drives through open and wooded grounds" with views of the harbour as well as "shady paths…winding among the 'tea-scrub', or skirting the rocky shores"* (Maiden, 1924, p.252 ref. G. C. Mundy, *Our Antipodes* 1852, i.70). Charles Moore repeatedly expressed concerns over the loss of native vegetation in the Domain including this statement in 1871: *"The native trees, mostly Eucalypts and Banksias, which a few years ago grew so thickly in all parts of the Domains, are fast disappearing from natural decay. However much the loss of these trees is to be deplored, there was no means of saving them"* (Moore 1871). Moore was under increasing pressure to transform this natural landscape. In the same year Moore confirmed his intent to construct a new designed landscape – a picturesque landscape with a focus on amenity, cultural and aesthetic values relevant to this period. In the 1871 Annual Report, Moore refers to the program of works in the "Domains" including a significantly upgraded roadway and footpaths and major earthworks (ibid. 1871). In 1903 Annual Report Maiden also noted the changing nature of the Domain and how some people could still *"remember it to be a place of wild flowers"* (Maiden 1903, p.29). Maiden believed that in just *"a few years the indigenous plants in the Domain will be far rarer than they are at present"*. In 1902 a *"list of plants growing without cultivation in the Outer Domain"* was compiled with the assistance of Julius H. Camfield (ibid. 1903). Amongst the native canopy species the list included *Eucalyptus pilularis* as well as other species such as *Angophora lanceolata* [syn. *A. costata*], *Eucalyptus haemastoma* var. *micrantha* [syn. *Eucalyptus*

	racemosa], *E. robusta, E. botryoides, E. tereticornis, E. resinifera, E. corymbosa* [syn. *Corymbia gummifera*], *Syncarpia laurifolia* [syn. *S. glomulifera*], *Ficus rubiginosa* and *Casuarina glauca*. Ongoing activities throughout the nineteenth century such as regular clearing of understorey 'brushwood' and dying trees, road construction, major earthworks, imported soils, turfing with exotic grasses, nutrient enrichment from street sweepings and other town rubbish carted into the Domain to cover *"many bare rocky places"* would have all contributed towards the loss of native vegetation. Remarkably, this schedule's listed remnant old growth specimens – *Eucalyptus pilularis* (blackbutt) have proved to be resilient survivors in this modified context.

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). Lawn DL28 contains two major groups of significance. The southern (cultivated) group of mixed figs was likely planted in the 1860s-1890s. The northern group conserves two remnant native old growth trees – *Eucalyptus pilularis* (blackbutt), likely pre-dating European settlement.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The southern (cultivated) group consisting of mixed figs (Moreton Bay figs, Port Jackson figs and white fig) represent a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96). The two old growth blackbutts (northern group) have persisted within a highly modified cultural landscape.
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The southern (cultivated) group of figs create an outstanding cultural landscape. Two specimens, a massive Moreton Bay fig and white fig, totally dominate the visual character of this location, together establishing a memorable "sense of place". The other fig specimens, set amid rolling lawns further reinforce the visual and aesthetic qualities of this place. The remnant old growth Eucalypts (northern group) retain the visual character of the original forest canopy.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. n/a

Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). The two old growth *Eucalyptus pilularis* (blackbutt) are rare examples of the former ecological communities which existed in the Domain prior to European settlement. Remarkably, these trees have persisted within a dramatically changing cultural landscape. They continue to play a vital role in providing habitat and connectivity, conserving genetic diversity and offering a seedbank for regeneration.
Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). The southern (cultivated) group of mixed figs are representative of Charles Moore's thematic approach in transforming the Domain into an iconic cultural landscape. These figs have come to symbolise Sydney's cultural landscape tradition. The remnant old growth Eucalypts are representative of the former 'wild' natural landscape which existed at the time of European settlement.
Integrity	High – Exceptional

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Australian Tropical Rainforest Plants, CSIRO publication, website accessed 2015

Benson, D., pers. comm., Jan., 2015

Fraser, C., 1828b, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 2* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Land and Property Information, SIX maps 2015
https://maps.six.nsw.gov.au

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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Heritage Trees in the Domain

Royal Botanic Garden, Sydney
SCHEDULE 12
PRECINCT: YURONG (LAWN ADJACENT TO SEAWALL)

HERITAGE ITEM:	**MIXED SPECIES GROUP PLANTING**
LEVEL OF SIGNIFICANCE:	**HIGH-VERY HIGH (MIXED GROUP)** **MODERATE-VERY HIGH (INDIVIDUAL SPECIMENS)**
LOCATION:	Domain – lawn area adjacent to seawall (between Yurong Gate and Mrs. Macquarie's Point)
LAWNS:	Yurong Precinct: DL39b, DL39a and DL40
HERITAGE ITEM/ TYPE:	Port Jackson figs/ mixed accents; cultural planting Single remnant native specimen
Item origin:	Ornamental/ cultivated; single wild (remnant native)
Cultivation Date:	mid-1880s to early 1900s; also more recent planting
Wild:	<1880s (wild – old growth/ regrowth specimen)
Integrity:	High
Height/ Spread/ DBH:	Varies (see individual items and schedules)
Form/ Health:	Varies (see individual items and schedules)
ITEMS SCHEDULED:	***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL39b IRN: 4224589 [COUNT: 1132] ***Araucaria cunninghamii*** Aiton ex A.Cunn. LAWN: DL39b IRN: 4219387 [COUNT: 979] ***Araucaria cunninghamii*** Aiton ex A.Cunn. LAWN: DL39a IRN: 4219392 [COUNT: 974] ***Araucaria cunninghamii*** Aiton ex A.Cunn. LAWN: DL39a IRN: 4062896 [COUNT: 975] ***Eucalyptus tereticornis*** Sm. LAWN: DL39a IRN: 4223642 [COUNT: 1333] ***Elaeocarpus kirtonii*** F.Muell. ex F.M.Bailey LAWN: DL39a IRN: 4210357 [COUNT: 3330] ***Araucaria heterophylla*** (Salisb.) Franco LAWN: DL39a IRN: 4062900 [COUNT: 853] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL40 IRN: 4224090 [COUNT: 1136] ***Araucaria cunninghamii*** Aiton ex A.Cunn. LAWN: DL40 IRN: 4062894 [COUNT: 980] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL40 IRN: 4223399 [COUNT: 3323] ***Ficus rubiginosa*** Desf. ex Vent. LAWN: DL40 IRN: 4223397 [COUNT: 1138]

Statement of significance

A total of fourteen (14) trees were investigated and assessed along the seawall lawn area [Lawns DL29b, DL39a, DL40] between Yurong Gate and Mrs. Macquarie's Point. Three of the trees (an immature Illawarra flame tree and two recently planted Norfolk Island pines) have been assessed and do not appear on the above schedule (i.e. no heritage significance – see comments below).

This lawn area is divided into three sections: DL39b (small triangular lawn), DL39a (lawn south of Fleet Steps) and DL40 (lawn north of Fleet Steps). Salt-wind exposure increases dramatically towards the point and this is a key limiting factor in plant selection. The site was reclaimed following seawall construction in 1884. Port Jackson figs *(Ficus rubiginosa)* and mixed native conifers including *Araucaria cunninghamii* (hoop pine) and *A. heterophylla* (Norfolk Island pine) dominate this plantation.

This harbour-side planting palette using native figs and conifers as dramatic accents has become synonymous with Sydney's iconic cultural landscapes. This plantation retains an exceptional level of continuity in the cultural landscape of Farm Cove. This living collection plays a vital role in maintaining visual links with the Royal Botanic Garden and Bennelong Point creating a dramatic "sense of place" against a backdrop of the city-skyline. As a group, this cultural plantation is considered to have very high heritage significance.

The mature figs and Araucarias are likely to date from the mid-1880s to early 1900s spanning the directorships of Charles Moore (1848-1896) and Joseph Maiden (1896-1924). These loosely clustered and scattered individual trees are believed to be representative of early cultural embellishment of the seawall enhancing opportunities for shade and amenity adjacent to the promenade. At this time, the Outer Domain retained much of its original native canopy, albeit increasingly modified by clearing and landscape works.

The native Port Jackson fig is highly adapted to harbour-side environmental conditions. These figs dominate the visual and aesthetic character of much of Sydney's harbour foreshores and they have thrived here along the seawall. A number of wild native figs (lithophytes) cascade over rocky outcrops above this location and along the scarp-line.

Continued over page

Statement of significance (continued)

At the southern end of this plantation in the triangular bed near Yurong Gate [Lawn DL39b] a broadly-spreading *Ficus rubiginosa* (Port Jackson fig) [IRN: 4224589] with low-hanging branches creates a memorable 'sense of place' at this entry point to the Botanic Garden. This is a magnificent specimen of very high significance. The 1943 aerial photo image shows this fig specimen with a canopy spread of 23 metres (30 metres in 2015). Similarly, another Port Jackson fig, although by no means as large [IRN: 4223397] overhangs the seawall promenade at the northern end [Lawn DL40] near an exposed scarp and overhang at Mrs. Macquarie's Point. Two other fig specimens of similar size and scale occur within the plantation. These three figs are considered to have high individual significance.

The emergent Araucarias create a dramatic sense of scale in this landscape. Their bold, dark and symmetrical forms punctuate the foreshores and ridges of Farm Cove. This plantation supports two older historic specimen plantings dating from the late 19th or early 20th century – *Araucaria cunninghamii* (hoop pine) [IRN: 4219392] (31 metres HT) and *A. heterophylla* (Norfolk Island pine) [4062900] (28 metres HT) [both planted in Lawn DL39a but separated by some distance]. Two younger hoop pines have been planted near the older hoop pine forming a visually significant cluster. The smaller (younger) specimen has a commemorative plaque reading (in part): *"This tree is dedicated to the memory of the Australian victims and all others who perished in the terrorist attacks of September 11, 2001"*. In this group context of hoop pines this commemorative hoop pine is considered to have high heritage significance.

The immature *Elaeocarpus kirtonii* (silver quandong) [IRN: 4223642] is another commemorative planting within this group. The plaque is inscribed: *"Unity in Adversity – This tree is planted to commemorate the address to the people of Sydney at the Royal Botanic Gardens and Domain by the President of the United States of America, The Honorable William Jefferson Clinton on Thursday, 21st November 1996"*. The silver quandong, native to warm temperate to subtropical rainforests of the coastal ranges, remains a relatively small specimen for this taxa and age group. In this context, the tree is considered to have moderate significance.

This group also includes another common rainforest specimen, *Brachychiton acerifolius* (Illawarra flame tree) [IRN: 4048529]. This tree is not considered to have heritage significance. Nevertheless, it plays an important supportive role in the overall composition and structure of the broader group.

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Statement of significance (continued)

Two sponsored plantings (2003) of *Araucaria heterophylla* (Norfolk Island pine) [IRN: 734699 and IRN: 734697 (both located in Lawn DL40) are not considered to have heritage significance at this stage. In time these tall Araucarias, with their significant landmark qualities, will make a dramatic contribution to the group dynamics and foci of Farm Cove. Notably, these two trees are part of a planned reinstatement of this iconic species around the foreshores of Farm Cove.

Notably, the plantation has a very tall, multi-trunked *Eucalyptus tereticornis* (forest red gum) [IRN: 4223642] (32 metres in height; 19 metres canopy spread; 1.60 dbh) located on talus below the rocky scarp near Yurong Gate. This tree is believed to be a 'wild' remnant component of the former ecological community – an old growth specimen which was likely cut to the base promoting regrowth and its current form. The 1943 aerial photo image shows the location in deep shadow from neighbouring trees so it remains inconclusive as to its history and provenance. The tree may have been cut to the base during the Inter-war period. Its current multi-trunked form, overall height and relatively large dbh suggest that it may be a remnant old growth/ regrowth specimen. This forest red gum provides habitat values and ecological connectivity. If indeed it is a remnant native tree, it conserves genetic diversity and maintains a valuable seedbank for regeneration. Further investigation is required however in the interim, in accordance with the definitions contained in this report this tree is assessed as having exceptional heritage significance.

It is essential that improved and continued high level protection of all of the above trees (including scheduled heritage trees, immature landmark specimens and trees providing a supportive role in this context) is provided during the summer events season.

Physical description	A total of fourteen (14) trees were investigated and assessed along the seawall lawn area between Yurong Gate and Mrs. Macquarie's Point. This lawn area is divided into three sections: DL39b (small triangular lawn), DL39a (lawn south of Fleet Steps) and DL40 (lawn north of Fleet Steps). The plantation is dominated by cultivated native Port Jackson figs and Araucarias (hoop pine and Norfolk Island pine). This area also includes a single mature forest red gum, believed to be remnant native old growth (regrowth specimen).

Historic background	By 1850 the Outer Domain was gaining immensely in popularity by the "inhabitants of Sydney". In 1852 the Domain had *"four miles of drives through open and wooded grounds" with views of the harbour as well as "shady paths…winding among the 'tea-scrub', or skirting the rocky shores"* (Maiden, 1924, p.252 ref. G. C. Mundy, *Our Antipodes* 1852, i.70). In 1858 Charles Moore refers to extensive clearing of brushwood along the western side of Mrs. Macquarie' Chair leaving only "such trees [which] were at all ornamental." (Moore 1858). The *Domain Cultural Landscape Study (Vol. 2)* describes a panorama taken in 1870 showing *"The Domain around Victoria Lodge in the north-eastern extremity of the Botanic Gardens to be cleared with scattered young introduced plantings in fenced enclosures, the walks and Mrs Macquarie's Road appearing starkly unembellished"* (Annable and Morris 2000, p.86). In the 1879 Annual Report Moore comments on the loss of *"Eucalypts and other native trees in the Domain [which] are fast dying out and will soon disappear altogether in that part towards the city; but on the eastern side very many of these are still in good health and will in all probability survive for many years."* (Moore, 1879). The *Domain Cultural Landscape Study (Vol. 2)* establishes c.1880 as the starting date for an ambitious construction program "toward the formation of a beach-walk." The seawall near Mrs Macquarie's Chair was completed in 1884 (Annable and Morris 2000, p.86). The site for this plantation has been largely reclaimed with imported backfill material following construction of the seawall. It is believed that the older cultivated trees in this plantation were established from the mid-1880s to early 1900s, spanning the directorships of Charles Moore (1848-1896) and Joseph Maiden (1896-1924). The thematic approach using local native Port Jackson figs, and native rainforest and Pacific Island species (particularly hoop pine and Norfolk Island pine in this location) has come to define much of the visual landscape character of Mrs Macquarie's Point as well as many other harbour-side public parks dating from this period. In 1899 Maiden writes about much pruning, some thinning-out and removal of dead wood from old gum-trees *"to preserve their green and healthy appearance as much as possible"*… *"Nevertheless, the day is approaching more rapidly than I like,*

	when the self-planted indigenous trees in the Domain will be a thing of the past…they pass away with the development of the improvements of civilised men. I may remark that several trees, both figs and pines, which were planted some years ago near the water's edge, for ornament and shade, have succeeded so well that they now interfere considerably with the magnificent view from the carriage-road, and will probably have to be thinned-out in the near future." (Maiden, 1898, p.23).

Application of heritage criteria

Historical significance SHR criteria (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area). The older mature figs and Araucarias (hoop pines and Norfolk Island pines) in this plantation are likely to date from the mid-1880s to early 1900s. The single mature Eucalyptus tereticornis (forest red gum) is believed to be remnant native old growth specimen.
Historical association significance SHR criteria (b)	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area). The planting palette is dominated by Port Jackson figs and Araucaria accents. These species represent a distinctive thematic approach typical of the work of Charles Moore (Director, Botanic Gardens 1848-96) and later J.H. Maiden (Director, Botanic Gardens 1896-1924).
Aesthetic significance SHR criteria (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area). The older trees in the plantation continue to reinforce a special harbour-side landscape character and aesthetic. The massive scale, dramatic character and clustering of emergent Araucaria accents along with native figs define one of Sydney's most iconic cultural landscapes.
Social significance SHR criteria (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons. This plantation includes two commemorative tree plantings dating from 1996 (President Clinton's address) and 2001 (in memory of victims of the 9.11 terrorist attack).
Technical/Research significance SHR criteria (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a
Rarity SHR criteria (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). n/a

Representativeness SHR criteria (g)	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments). This group, dominated by native Port Jackson figs and *Araucaria* accents are representative of mid-to late 19th and early 20th century planting. These trees have come to symbolise Sydney's cultural landscape tradition. The thematic approach became the model for many of the city's public parks and open spaces.
Integrity	High

Heritage listings	"The Domain", SHR, Sydney LEP 2012, Listing No. I1653, Gazettal date: 14 December 2012 (Office of Environment & Heritage).

Sources

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist 1884-1913 under Directors Moore and Maiden – copy held in Charles Moore's reports).

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports).

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

This Heritage Survey Data Sheet is based on the NSW State Heritage Inventory template.
The NSW Heritage Manual guidelines were used in assessment of heritage items.

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References

Annable, R., and Morris, C., 2000 Volume 2: *Cultural Landscape Study* (part of Mather & Associates Landscape Architects (MALA) 2000, *The Domain: Master Plan Outline* (Vol. 1).

Armstrong, J., 1868 Historical Maps & Plans, RBG (from C. Simpson) AONSW: Plan No.5585 MAP SHEET 38, *Plan Shewing The Road From The Statue Entrance Of The Domain To The Botanic Garden Gate,* 22 July 1868 (2 maps)

Australian Plant Name Index (APNI) <http://biodiversity.org.au> [website accessed Jan-Jun 2015]

Australian Tropical Herbarium, James Cook University, *Australian Tropical Rainforest Plants – Edition 6,* CSIRO publication <http://www.ath.org.au> [website accessed Jan-Jun 2015]

Bidwell, D., 2015, pers. comm., Royal Botanic Garden Sydney

Colonial Plants Database – Sydney Living Museums <www.sydneylivingmuseums.com.au/research> [website accessed Jan-Jun 2015]

Conybeare Morison, 2005 *Royal Botanic Gardens Conservation Management Plan* prepared for the Royal Botanic Gardens Sydney (Conybeare Morrison, February 2005).

Council of Heads of Australasian Herbaria (CHAH) 2006, *Australian Plant Census* <http://biodiversity.org.au> [website accessed Jan-Jun 2015]

Council of Heads of Australasian Herbaria, *Biographical Notes* (extracted from A.E. Orchard (1999) *A History of Systematic Botany in Australia*, in Flora of Australia Vol.1, 2nd ed. ABRS <http://www.cpbr.gov.au/biography/anderson-james.html> [website accessed 15 June 2015]

Council of Heads of Australasian Herbaria, *Biographical Notes* (extracted from A.E. Orchard (1999) *A History of Systematic Botany in Australia*, in Flora of Australia Vol.1, 2nd ed. ABRS <http://www.cpbr.gov.au/biography/cunningham-allan.html> [website accessed 15 June 2015]

Cuneo P, Leishman MR (2006) African Olive (*Olea europaea* subsp. *cuspidata*) as an environmental weed in eastern Australia: a review. *Cunninghamia* 9, 545-577.

Department of Planning, Sydney, 1990, *Street Trees in New South Wales – Guidelines for Conservation and Management* (based on original research by Helen Armstrong and Craig Burton, UNSW).

Fraser, C., 1827, *List of exotic forest trees cultivated in the Botanic Gardens, Sydney December, 1827* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Fraser, C., 1827, *List of fruits cultivated in The Botanic Gardens, Sydney Up to Nov., 1827* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Fraser, C., 1828a, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 1* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Fraser, C., 1828b, *Catalogue of plants cultivated in The Botanic Gardens, Sydney At January, 1828 – Part 2* (hand-written copies) records held at Daniel Solander Library, Royal Botanic Garden, Sydney

Fraser, C., 1828?, *Draft Report (Botanic Gardens, Sydney) for the year 1828?* (hand-written copy) record held at Daniel Solander Library, Royal Botanic Garden, Sydney

Fraser, C., 1831, *Report of the Botanic Gardens, Sydney for the year 1831* (hand-written copy) record held at Daniel Solander Library, Royal Botanic Garden, Sydney

Garcia, M., 2015, pers. comm., Royal Botanic Garden Sydney

Gilbert, L.A., 1985, *Reports on Botanic Gardens extracted from Reports of the Department of Agriculture 1924-1979:* extracts held at Daniel Solander Library, Royal Botanic Garden, Sydney (accessed: 5 February 2015)

Gilbert, L., 1986, *The Royal Botanic Gardens, Sydney – A History 1816-1985* Oxford University Press

Godden Mackay Logan; Matthew K., 1999 *Royal Botanic Gardens and Outer Domain – Archaeological Assessment and Research Design,* Report prepared for Heritage Group, NSW Department of Public Works and Services

Jones, J., Plan of the Botanic Garden, Sydney (undated – confirmed as 1871, Garcia, M., 2015) (A4 colour copy of map by James Jones, head horticulturist under Directors Moore and Maiden – copy held in Charles Moore's reports)

Jones, L., *Plants in the Botanic Gardens, Sydney* map 1894-95 (A4 colour map by James Jones – copy held in Charles Moore's reports)

Jones, J., 1903, Historical Maps & Plans, RBG (from C. Simpson) ML: *D121 (CY1708) MAP SHEET 59, *Plan of portion of Domain Showing proposed new Law Court Buildings encroachment in Domain and Consequent destruction of several established trees, and Plantations, 13 Oct. 1903*

King, C.J., 'Moore, Charles (1820-1905)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, published first in hardcopy 1974<http://adb.anu.edu.au/biography/moore-charles-4229> [website accessed 16 June 2015]

Land and Property Information, SIX maps 2015 <https://maps.six.nsw.gov.au> [website accessed Jan-Jun 2015]

Lands Department: 225-574, 1894, Historical Maps & Plans, RBG (from C. Simpson) MAP SHEET 55 – *The Outer Domain, City of Sydney, Parish of St. James, County of Cumberland, 1894* (2 maps)

Lyons, M., and Pettigrew, C.J., 'Maiden, Joseph Henry (1859-1925)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, published first in hardcopy 1986 <http://adb.anu.edu.au/biography/maiden-joseph-henry-7463>[website accessed 16 June 2015]

Mabberley, D.J., 2002, *The Agathis brownii case (Araucariaceae),* Telopea 9(4): pp.743-754.

Mabberley, D.J., 2004 *Significant Trees at Royal Botanic Gardens Sydney (i.e. exclusive of The Domain and the grounds of Government House)* and Excel file identifying significance level, number, bed, species and accession (Report written: 3 July 2004, provided by Miguel Garcia).

Maiden, J. H., Reports from Director of the Botanic Gardens and Domains, Sydney 1898-1915.

Maiden, J. H., Reports from Director of the Botanic Gardens, Government Domains, and Centennial Park, Sydney 1916-1924.

Maiden, J.H., 1903, A Guide to the Botanic Gardens by J. H. Maiden, Director and Government Botanist with the assistance of members of the staff, NSW Government Printers

Maiden, J.H., 1924, *J.H. Maiden's Centennial History of the Gardens: A Manuscript* – Part 2 Ch. VII (Orig.) The Outer Domain, unpublished manuscript including hand-written corrections by J.H. Maiden

Mather & Associates Landscape Architects (MALA) 2000, *The Domain: Master Plan Outline* (Vol. 1)

Mills, C., 2010 *Hortus Camdenensis* – An illustrated catalogue of plants grown by Sir William MacArthur at Camden Park, NSW, Australia between c.1820 and 1861 <http://www.hortuscamden.com/> and <http://trove.nla.gov.au/> [website accessed Jan-Jun 2015]

Moriarity, W., 1861 Historical Maps & Plans, RBG (from C. Simpson) AONSW:X1077 MAP SHEET 31, *Plan of Farm Cove and The Domain shewing the Proposed Seawall and Carriage Drive, 1861* (8 X A1 colour maps with trees shown in elevation)

Moore, C., Reports from Director of Botanic Garden, Sydney 1849-58, 1870-71 and 1878-79.

Morris, C., pers. comm., 2015

Map of Parish of Saint James, County of Cumberland, c.1835 AONSW: Map No.5472 identified as AO MAP No. 34 on sheet, Daniel Solander Library, Royal Botanic Garden Sydney

Office of Environment and Heritage, State Heritage Register (SHR) – The Domain and The Domain (including Mrs Macquarie's Chair), 2012 (website accessed: 5 February 2015)

Ogaya, R & Penuelas, 2004 J., *Phenological patterns of Quercus ilex, Phyllyrea latifolia and Arbutus unedo growing under a field experimental drought*, Ecoscience 11 (3): 263-270 (2004)

Perry, T.M., 'Cunningham, Allan (1791-1839)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, published first in hardcopy 1966<http://adb.anu.edu.au/biography/cunningham-allan-1941> [website accessed 15 June 2015]

Read, S., 2015, pers. comm., Office of Environment and Heritage

Royal Botanic Gardens & Domain Trust, Royal Botanic Garden Sydney <http://www.rbgsyd.nsw.gov.au/welcome/quick_links/our_history> [15 June 2015]

Royal Botanic Garden Sydney Map 2006 with grid reference and planting beds Daniel Solander Library, Royal Botanic Garden Sydney [accessed Jan-Jun 2015]

Royal Botanic Garden Sydney, NSWLive – The Domain (selected precincts) [accessed Jan-Jun 2015]

Scientific Committee (2010). Final Determination to list the "Invasion of native plant communities by African olive *Olea europaea* L. subsp. *cuspidata* (Wall ex G. Don Cif.)", as a key threatening process under Schedule 3 of the Act. NSW Scientific Committee, Sydney.

Sydney Morning Herald, 9th September 1897, *"The Domain and Botanic Gardens, Sydney"* written by Edward Stack, p.4 <http://trove.nla.gov.au/ndp/del/page/1359452?zoomLevel=3> [17 June 2015]

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

The Royal Botanic Gardens and Domain Trust., *PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia* <http://plantnet.rbgsyd.nsw.gov.au> [website accessed Jan-Jun 2015]

Wilson, W., 1836 Map of the Town of Sydney, 1836 SCC [Historical Maps & Plans, RBG REF. MAP 20]